

Only the German version of the module description as part of the study regulations is legally binding.

Module name	Algorithms Lab
Module number	INF-25-Ba-P-ALAB
Responsible lecturer	Prof. Dr. László Kozma laszlo.kozma@tu-dresden.de
Qualification objectives	Students are able to implement and optimize algorithms and evaluate experimental results. They master the theoretical and practical tools to analyze the duration of their implementation and to improve it with regard to the requirements of the application.
contents	Contents of the module are the faithful implementation of selected algorithms of theoretical computer science and the analysis and optimization of program code. This includes working with formal specifications, understanding data structures and the complexity of their operations, as well as methods for the practical implementation of theoretical concepts in the context of the chosen programming language.
Forms of teaching and learning	The module includes internships in the scope of 4 SWS and self-study. The teaching language of the internships can be German or English and will be specified by the lecturer at the beginning of each semester and announced in the usual way.
Requirements for participation	In the Bachelor's program in Computer Science, the competencies to be acquired in the modules INF-25-Ba-Prg Programming and RoboLab, INF-25-Ba-AuD Algorithms and Data Structures and INF-25-Ba-AuB Automata and Predictability Theory are required.
usability	The module is a compulsory elective module of the Bachelor's internship in the bachelor's degree program Computer Science, which must be chosen in accordance with the annex to the examination regulations. The module creates the prerequisites for the modules, which it provides under prerequisites for participation.
Conditions for awarding credits	The credit points are earned when the module examination has been passed. The module exam consists of a complex performance of 80 hours. The language of the examination is German or English at the choice of the student.
Credits and grades	6 credit points can be earned through the module. The module grade corresponds to the grade of the examination performance.
Frequency of the module	The module is offered every summer semester.
workload	The total workload is 180 hours.
Duration of the module	The module covers one semester.

