

Scientific C++ Programming (Advanced)					
Module-No./Abbreviation	Credits	Workload	Term	Frequency	Duration
CE-W10/SCPA	3 CP	90 h	2 nd Sem.	Summer term	1 Semester
Courses			Contact hours	Self-Study	Group Size:
Scientific C++ Programming (Advanced)			2 SWS (30 h)	60 h	No Restrictions
Prerequisites					
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Learning goals / Competences:					
After successfully completing the module, the students					
<ul style="list-style-type: none"> • are familiar with advanced programming concepts and constructs in C++, • are able to design and develop modern C++ applications using latest language features, • can review and contribute to advanced C++ projects. 					
Content					
The lecture addresses advanced topics in C++ programming. Object-oriented programming concepts such as classes, inheritance and polymorphism as well as generic programming concepts such as templates are introduced. The standard template library (STL) and selected functionalities from C++14 and above are surveyed. Best practices as well as the organization and development of advanced C++ projects are discussed.					
In hands-on sessions, programming exercises are used to discuss and illustrate the presented content.					
Teaching methods / Language					
Block course (equiv. to 2 SWS) / English					
Mode of assessment					
Written examination (120 min., 100%)					
Requirement for the award of credit points					
Passed final module examination					
Module applicability					
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Weight of the mark for the final score					
-					
Module coordinator and lecturer(s)					
Prof. Dr. A. Vogel, Assistants					
Further information					