

Course Manual GUI

Graphical User Interfaces

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– General information

Long name Graphical User Interfaces

Approving CModule [GUI BaTIN](#)

Responsible Prof. Dr. Dieter Rosenthal
Professor Fakultät IME

Valid from winter semester
2021/22

Level Bachelor

Semester in the year winter semester

Duration Semester

Hours in self-study 60

ECTS 5

Professors Prof. Dr. Dieter Rosenthal
Professor Fakultät IME

Requirements procedural and object-oriented programming in C/C++ and Java structure and functions of operating systems

Language German

Separate final exam Yes

Literature

keine

Final exam

Details

Oral exam, in case of larger quantities of examinees also written exams

Students shall prove that they can 1.) explain and apply fundamental terms, 2.) apply programming concepts to solve application problems in the field of programming of graphical user interfaces. In written exams additional 3.) assess the correctness of statements and program code. Typical types of assignments are 1.) multiple choice questions, fill-in-the-blank texts, assessment of statements, 2.) write program code to solve given problems of limited size and 3.) finding errors in texts and program code.

Minimum standard

At least 50% of the total number of points.

Exam Type

EN mündliche Prüfung,
strukturierte Befragung

– Lecture / Exercises

Learning goals

Goal type	Description
Knowledge	fundamental terms and techniques of graphical user interfaces within Microsoft Windows concepts of windows and messages
Knowledge	using of OS-given APIs in Java including of AWT and Swing discussion of their pros and cons
Skills	using of Microsofts WinAPI
Skills	using of AWT und Swing classes for graphical user interfaces in Java

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	1
Exercises (shared course)	1
Tutorial (voluntary)	0

Special requirements

procedural und objectorientierte Programmierung in C/C++ und Java, Struktur und Funktionen von Betriebssystemen

Accompanying material

lecture foils (electronic), exercises (electronic), example program code and projects (electronic), links to relevant Web pages (esp. API documentation, programming examples, and free software development tools)

Separate exam

No

– Practical training

Learning goals

Goal type	Description
Knowledge	programming of graphical user interfaces as individual tasks - details see "Vorlesung/Übung"
Skills	using programming environments for guis
Skills	implementation of gui applications of medium complexity in small teams

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	1
Tutorial (voluntary)	0

Special requirements

procedural and object-oriented programming in C/C++ and Java

Accompanying material

lecture foils (electronic), example programs and projects (electronic), links to relevant Web pages (esp. API documentation, programming examples, and free software development tools)

Separate exam Yes

Separate exam

Exam Type EN praxisnahes Szenario bearbeiten (z.B. im Praktikum)

Details

Students work in small teams. Each team completes multiple "rounds" with assigned appointments in the lab. In each round, programming assignments are solved. For the preparation of a laboratory appointment a "preparation sheet" has to be solved. The acquired knowledge will be tested at the beginning of the appointment (short written entrance test, interview with the supervisor). In case of failure, a follow-up appointment must be taken; in case of multiple failures, the student will be excluded from the lab. In case of success, a "laboratory work sheet" with further tasks will be worked on under supervision (and, if necessary, with assistance).

Minimum standard

Successful participation in all laboratory appointments, i.e. in particular independent solution (or with some assistance if necessary) of the programming assignments.