COMPLEX LAB
SYSTEMS PROGRAMMING

Introduction
https://tud.de/inf/os/studium/praktika-seminare/komplexpraktikum-systemnahe-programmierung

HORST SCHIRMEIER
Overview

• Course Goals

• Organizational Stuff
  – Earning credits
  – Daily schedule, Communication, Feedback

• Topics
Overview

- **Course Goals**

- Organizational Stuff
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- Topics
Course Goals

- Low-level systems programming
- Advanced C++ skills
- Basic multi-threaded programming
- Intimate tools knowledge
- Hands-on experience
- Good preparation for practical courses

Good foundation for practical courses at the SyA institute in general and the OS group in particular
Earning Credits

- 4 week-hour complex lab
- You can get credits within the modules
  - INF-04-KP*
  - INF-DSE-20-E-ADSE, INF-DSE-20-M-INT
  - INF-E-4
  - INF-MA-PR
  - INF-BAS4**, INF-VERT4
  - IST-05-FG-AVS
  - MINF-04-KP-FG2
- Solve practical assignments after the workshop
  * INF-04-KP: ... plus 15-minute colloquium
  ** INF-BAS4: ... max. 4 SWS, see link on the website
Daily Schedule, Communication

• **Start:** 09:30
• Lunch break: around 12:30
• Additional breaks on demand
• **End:** 16:00 at the latest

• Communication via mailing list
  sysprog2023@os.inf.tu-dresden.de (sign up on the website!)

• **Feedback welcome:** in person, via email, or via our Anonymous Mailbox
Topics

• Day 1 – Tools and Build System
• Day 2 – C++: Basics and Beyond
• Day 3 – Rust for Systems
• Day 4 – Assembler
• Day 5 – Debugging Techniques
• Day 6 – Multithreading
• Day 7 – Underneath POSIX
Lehrveranstaltungen

Proseminar
Verteilte Betriebssysteme
Betriebssystembau

Echtzeitsysteme
Mikrokernbasierte Betriebssysteme
Komplexpraktikum Mikrokernsysteme

Schedulingtheorie
Mikrokernkonstruktion

Paper Reading Group

Hauptseminar / EZAG
+ spannende Themen für Abschluss- und Forschungsarbeiten

Sommer
Winter

2023-09-18
SysProg: 0 Introduction
Complex Lab Systems Programming

Happy hacking!