Module EIT-RTS-541-M-7

Real-Time Systems II (M, 4.0 LP)

Module Identification

Module Number	Module Name	CP (Effort)
EIT-RTS-541-M-7	*Real-Time Systems II*	4.0 CP (120 h)

Basedata

CP, Effort	4.0 CP = 120 h
Position of the semester	1 Sem. in WiSe
Level	[7] Master (Advanced)
Language	[EN] English
Module Manager	Fohler, Gerhard, Prof. Dr. techn. (PROF | DEPT: EIT) (/staff/341/)
Lecturers	Fohler, Gerhard, Prof. Dr. techn. (PROF | DEPT: EIT) (/staff/341/)
Area of study	[EIT-RTS] Real Time Systems
Reference course of study	[EIT-88.781-SG#2010] M.Sc. Electrical and Computer Engineering [2010] (/mhb/FB-EIT/cos-556/)
Livecycle-State	[NORM] Active

Courses

Type/SWS	Course Number	Choice in Module-Part	SL	PL	CP	Sem.
2V+1U	**EIT-RTS-541-K-7** (/mhb/courses/EIT-RTS-541-K-7/)	P	-	PL1	4.0	WiSe

- About **[EIT-RTS-541-K-7]**: Title: "Real-Time Systems II"; Presence-Time: 42 h; Self-Study: 78 h

Examination achievement PL1

- Form of examination: **examination in form of partial achievements**
- Examination Frequency: each semester

oral exam 15 min (50%) + written exam 60 min (50%)

Evaluation of grades

The grade of the module examination is also the module grade.

Contents

From [EIT-RTS-541-K-7] Real-Time Systems II (/mhb/courses/EIT-RTS-541-K-7/):

- Aperiodic servers
- Off-line scheduling
- Scheduling of multiprocessor systems
- Integration of offline – online scheduling
- Hierarchical scheduling & hypervisors
- Real-time networks
- Worst case execution time analysis
- Overrun & resource management

Competencies / intended learning achievements

After completing this module you can...

- ... elaborate on problems related to real-time scheduling on single and multicore processors and some possible solutions.
- ... explain how Hypervisors and real-time networks work.
- ... give an overview of real-time resource management and overrun handling techniques.

Requirements for attendance (informal)

Modules:

- [EIT-RTS-540-M-4] Real-Time Systems I (M, 4.0 LP) (/mhb/modules/EIT-RTS-540-M-4/)
- [EIT-RTS-545-M-4] Operating Systems (M, 4.0 LP) (/mhb/modules/EIT-RTS-545-M-4/)

Requirements for attendance (formal)

None

References to Module / Module Number [EIT-RTS-541-M-7]

Course of Study	Section	Choice/Obligation
[EIT-88.781-SG#2010] M.Sc. Electrical and Computer Engineering [2010] (/mhb/FB-EIT/cos-556/)	Elective Subjects	[W] Elective Module
[EIT-88.A44-SG#2018] M.Sc. Media and Communication Technology [2018] (/mhb/FB-EIT/cos-568/)	Technical Elective Subjects	[W] Elective Module
[EIT-88.?-SG#2021] M.Sc. Electrical and Computer Engineering [2021] (/mhb/FB-EIT/cos-686/)	Technical Elective Modules	[W] Elective Module
[EIT-88.?-SG#2021] M.Sc. Media and Communication Technology [2021] (/mhb/FB-EIT/cos-688/)	Technical Elective Modules	[W] Elective Module
[EIT-88.A20-SG#2021] M.Sc. European Master in Embedded Computing Systems (EMECS) [2021] (/mhb/FB-EIT/cos-566/)	Elective Subjects	[W] Elective Module
[EIT-88.?-SG#2021] M.Sc. Automation and Control (A&C) [2021] (/mhb/FB-EIT/cos-676/)	Elective Modules	[W] Elective Module
[EIT-88.?-SG#2021] M.Sc. Embedded Computing Systems (ESY) [2021] (/mhb/FB-EIT/cos-677/)	Elective Subjects	[W] Elective Module

Module-Pool	Name
[GS-CVT-EE-E-MPOOL-6 (/mhb/modulepools/GS-CVT-EE-E-MPOOL-6/)]	Catalog Electives Electrical and Computer Engineering