

Module Handbook (<https://modhb.uni-kl.de/>)

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Module EIT-LRS-429-M-7

Robust Control (M, 3.0 LP)

Module Identification

Module Number	Module Name	CP (Effort)
EIT-LRS-429-M-7	<i>Robust Control</i>	3.0 CP (90 h)

Basedata

CP, Effort	3.0 CP = 90 h
Position of the semester	1 Sem. in WiSe
Level	[7] Master (Advanced)
Language	[EN] English
Module Manager	Liu, Steven, Prof. Dr.-Ing. (PROF DEPT: EIT) (/staff/345/)
Lecturers	Liu, Steven, Prof. Dr.-Ing. (PROF DEPT: EIT) (/staff/345/)
Area of study	[EIT-LRS] Control Systems
Reference course of study	[EIT-88.781-SG#2010] M.Sc. Electrical and Computer Engineering [2010] (/mhb/FB-EIT/cos-556/)
Lifecycle-State	[NORM] Active

Courses

Type/SWS	Course Number	Choice in Module-Part	SL	PL	CP	Sem.
2V	EIT-LRS-429-K-7 (/mhb/courses/EIT-LRS-429-K-7/)	P	-	PL1	3.0	WiSe

- About [EIT-LRS-429-K-7]: Title: "Robust Control"; Presence-Time: 28 h; Self-Study: 62 h

Examination achievement PL1

- Form of examination: **oral examination (30 Min.)**
- Examination Frequency: each semester

Evaluation of grades

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

Contents

From [EIT-LRS-429-K-7] Robust Control (/mhb/courses/EIT-LRS-429-K-7/):

- Introduction in control sensitivity and robustness
- multivariable frequency response design
- H2 regulator
- Hinf regulator
- case studies

Competencies / intended learning achievements

After completing this module you can...

- ... explain the concepts of robustness analysis.
- ... explain robust stability and performance of SISO and MIMO systems.
- ... apply knowledge of robust control design.

Requirements for attendance (informal)

Modules:

- [EIT-LRS-437-M-4] Optimal Control (M, 3.0 LP) (/mhb/modules/EIT-LRS-437-M-4/)
- [EIT-LRS-504-M-3] Linear Control (M, 5.0 LP) (/mhb/modules/EIT-LRS-504-M-3/)

Requirements for attendance (formal)

None

References to Module / Module Number [EIT-LRS-429-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/)	Theoretical Part	[P] Compulsory
[EIT-88.?-SG#2021] M.Sc. Electrical and Computer Engineering [2021] (/mhb/FB-EIT/cos-686/)	Major Automation & Control (AUT)	[P] Compulsory
[EIT-88.?-SG#2021] M.Sc. Automation and Control (A&C) [2021] (/mhb/FB-EIT/cos-676/)	Major "Real-Time Control Systems" (RCS)	[P] Compulsory
Module-Pool	Name	
[EIT-AUT-CAS-WP-MPOOL-7 (/mhb/modulepools/EIT-AUT-CAS-WP-MPOOL-7/)]	CAS Core Electives	