

# Course Manual DLO

image processing master

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## – General information

**Long name** image processing master

**Approving CModule** [DLO MaET](#), [DLO MaMT](#),  
[DLO MaTIN](#)

**Responsible** Prof. Dr. Jan Salmen  
Professor Fakultät IME

**Valid from** summer semester 2021

**Level** Master

**Semester in the year** summer semester

**Duration** Semester

**Hours in self-study** 60

**ECTS** 5

**Professors** Prof. Dr. Jan Salmen  
Professor Fakultät IME

**Requirements** The students should have some basic knowledge about image processing and pattern recognition

**Language** German

**Separate final exam** Yes

## Literature

## Final exam

**Details** project documentation

**Minimum standard** The documentation has to contain a description of the applied method and the achieved results. Principles of scientific work have to be applied. The used programs must run without errors, and the results must be plausible.

**Exam Type** EN schriftlicher  
Ergebnisbericht

## – Lecture / Exercises

### Learning goals

Goal type	Description
Knowledge	Deep learning algorithms and their application for object recognition in images.
Knowledge	learning algorithms, their training and evaluation

### Special requirements

keine

**Accompanying material** undefined

**Separate exam** No

### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Tutorial (voluntary)	0

## – Practical training

### Learning goals

Goal type	Description
Skills	training of a neural network
Skills	evaluation of the performance of a neural network

### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	3
Tutorial (voluntary)	0

### Special requirements

keine

**Accompanying material** undefined

**Separate exam** Yes

### Separate exam

**Exam Type** EN Übungsaufgabe mit fachlich / methodisch eingeschränktem Fokus lösen

**Details** Training and evaluation of a neural network with dedicated examples

**Minimum standard** Presence and active collaboration

## – Lecture / Exercises

### Learning goals

Goal type	Description
Knowledge	reading of selected literature
Skills	in-depth implementation and evaluation of selected image processing method
Skills	document results in an adequate way
Skills	implement algorithm from literature
Skills	assessment of results

### Special requirements

<b>Accompanying material</b>	elektronische Version der verwendeten Literatur
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<b>Separate exam</b>	No
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### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Project	0
Tutorial (voluntary)	0