

Course

BV3 - Project Image Processing / Pattern Recognition

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^ General information

Long name	Project Image Processing / Pattern Recognition
Approving CModule	BV3_BaMT
Responsible	Prof. Dr. Jan Salmen Professor Fakultät IME
Level	Bachelor
Semester in the year	summer semester
Duration	Semester
Hours in self-study	162
ECTS	6
Professors	Prof. Dr. Jan Salmen Professor Fakultät IME Prof. Dr. Lothar Thieling Professor Fakultät IME
Requirements	Module Image Processing Module Pattern Recognition
Language	English
Separate final exam	No

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Learning goals

Knowledge

problem specific methods resulting from system model and literature search

Skills

skilled use of software development environment

skilled use of tools for image processing and image analysis

if required: skilled use of tools for training neural networks

understanding of scientific texts in English

presentation of project results in English

accomplish complex tasks in teams

present project results

Derive complex problem solutions that can be implemented using image processing and image analysis

analyse and understand complex problems

derive system behaviour from specifying texts

analyse systems

model system from subsystems

model, implement, and test subsystems

map subsystems as far as possible on available components (image processing modules), i.e. selection of models and parameters

implement and test required but not available image processing modules in C or Java using software development environment

implement, test, and validate entire system (problem solution)

Derive problem solution as chain of algorithms using image processing modules

parametrize image processing modules

test and validate solution

iteratively improve algorithmic chain

Expenditure classroom teaching

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

Separate exam

Exam Type

working on projects assignment with your team e.g. in a lab)

Details

Presentation and documentation of project progress including oral project presentation at mile stone meetings.

Final report.

Minimum standard

Project has to be processed with adequate effort and the achieved results must be visible from the presentations and documentation.