Technology
Arts Sciences
TH Köln

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. Dietmar Kunz Professor Fakultät IME im Ruhestand
Level	Bachelor
Semester in the year	summer semester
Duration	Semester
Hours in self-study	162
ECTS	6
Professors	Prof. Dr. Dietmar Kunz Professor Fakultät IME im Ruhestand Prof. Dr. Lothar Thieling Professor Fakultät IME
Requirements	Module Image Processing Module Pattern Recognition
Language	English
Separate final exam	No

^ Project

Learning goals

Knowledge

problem specific methods resulting from system model and literature search

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Skills

skilled use of software development environment

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skilled use of tools for image processing and image analysis

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if required: skilled use of tools for training neural networks

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understanding of scientific texts in English

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presentation of project results in English

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accomplish complex tasks in teams

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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

Presenation 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.