

## Course Description – Summer 2020

<b>Title</b>	Robot Vision
<b>Faculty</b>	Electrical Engineering
<b>Professor</b>	Prof. Dr. Maria Schweigel
<b>ECTS</b>	5
<b>Level</b>	Master
<b>Requirements</b>	Basic knowledge in electrical engineering, signals and systems, digital signal processing and MATLAB/Simulink is recommended.
<b>Add. Information</b>	<a href="https://www.hs-schmalkalden.de/hochschule/fakultaeten/fakultaet-elektrotechnik/internationales-f-et/international-students.html">https://www.hs-schmalkalden.de/hochschule/fakultaeten/fakultaet-elektrotechnik/internationales-f-et/international-students.html</a>
<b>Content</b>	The students get to know the theoretical foundations of computer vision under consideration of issues of mobile robotics. Especially they learn about physics of light and color, means how a picture is generated, transforming coordinate systems, formation of an image, feature extraction and vision based control. All theoretical knowledge will be demonstrated on examples by using Vision Module of Matlab. In the practice part students will apply theoretical knowledge by solving exercises and working on own vision project using Matlab.