

*Intended Learning Outcomes of the Master Industrial Engineering and Management Science programme.*

<b>Professional Academic Qualifications MSc</b>	
	<p>The graduate is able to quickly identify, thoroughly comprehend, critically assess, correctly apply, and creatively integrate existing scientific knowledge that can be used for analysing problems and designing solutions, in one of the domains of:</p> <ul style="list-style-type: none"> <li>• Production and logistics;</li> <li>• Finance and accounting;</li> <li>• Health care</li> </ul>
<b>A1</b>	<p><i>The student has a thorough overview of the <b>structure of research and design processes</b>.</i> The student is able to:</p> <ul style="list-style-type: none"> <li>• Identify the various steps in performed research and design</li> <li>• Properly break up own research and design activities into sub-processes</li> </ul> <p>These processes are intertwined: Research is needed for producing knowledge that is used for designing solutions in a specific context. Such knowledge is produced in a purposeful and methodical way (using scientific research methods). It may or may not be generalizable knowledge.</p>
<b>A2</b>	<p><i>The student has an overview of quantitative and qualitative <b>empirical research methods</b>.</i> The student is able to:</p> <ul style="list-style-type: none"> <li>• Critically analyse performed research as to the methodological aspects</li> <li>• Select an appropriate method and justify this choice for research to be performed</li> <li>• Apply this method in relatively complex cases</li> </ul>
<b>A3</b>	<p><i>The student has a thorough overview of <b>quantitative modelling techniques</b> for operational processes in this domain.</i> The student is able to:</p> <ul style="list-style-type: none"> <li>• Select appropriate modelling techniques and justify this choice</li> <li>• Apply these techniques in relatively complex cases</li> <li>• Critically analyse the results of modelling activities</li> </ul>
<b>A4</b>	<p><i>The student is able to <b>integrate</b> existing knowledge, modelling techniques, and research results for designing, validating, and selecting solutions in relatively complex cases.</i> This is challenging, because existing knowledge may not fully apply to a specific situation, models are always stylized, empirical research always has limitations, and some aspects have been left out of scope from the beginning anyway.</p>
<b>A5</b>	<p><i>The student has an overview of <b>implementation methods and processes</b>.</i> The student is able to:</p> <ul style="list-style-type: none"> <li>• Critically analyse ongoing or finished implementation processes</li> <li>• Plan globally an implementation process in a relatively complex case</li> </ul>
<b>A6</b>	<p><i>The student has an overview of <b>evaluation methods and techniques</b>.</i> The student is able to:</p> <ul style="list-style-type: none"> <li>• Critically analyse the results of performed evaluations</li> <li>• Select appropriate evaluation methods and justify this choice</li> <li>• Carry out an evaluation in relatively complex cases</li> </ul>
<b>A7</b>	<p><i>In order to be able to meet these competencies, the graduate must have <b>mastered</b> a set of <b>core disciplines</b> in the specialization domain.</i></p>
<b>A8</b>	<p><i>The student is able to <b>contribute</b> to the development of the academic profession by identifying generic consequences and implications from professional cases (for example, general presentations, write papers about design solutions).</i></p>
<b>General Academic Qualifications MSc</b>	
<b>B1</b>	<p><i>The student is able to <b>work autonomously and is self-reliant</b></i> The student:</p> <ul style="list-style-type: none"> <li>• Is able to work on complex assignments and conduct research projects without clear boundaries</li> <li>• Can apply effective time management and is self-reinforcing</li> </ul>
<b>B2</b>	<p><i>The student is able to work in <b>multidisciplinary teams</b></i> The student:</p> <ul style="list-style-type: none"> <li>• Can form a team to work with based on what is required for the project or assignment</li> <li>• Understands decision-making techniques and how to effectively organise meetings</li> </ul>

	<ul style="list-style-type: none"> <li>• Can effectively make use of a supervisor and organise feedback</li> </ul>
<b>B3</b>	<p><i>The student is able to <b>communicate properly</b> (in oral and written form) with various stakeholders and from different backgrounds</i></p> <p>The student:</p> <ul style="list-style-type: none"> <li>• Can write an academic text, based on clear questions or hypotheses.</li> <li>• Is capable of designing, conducting and digesting interviews and other means of oral input and can identify argumentation fallacies and the like</li> <li>• Is able to organise the preconditions for co-production of knowledge and interaction</li> <li>• Can balance appropriate body language, content, and the use of audio-visual means on the basis of a good understanding of the audience</li> </ul>
<b>B4</b>	<p><i>The student is able to conduct a <b>bibliographic search</b> and knows how to reference correctly</i></p> <p>The student:</p> <ul style="list-style-type: none"> <li>• Can select and judge relevant scientific literature for projects and exams and has a pro-active attitude regarding acquiring and updating knowledge</li> <li>• Is able to properly use quotation and paraphrases and compile a relevant reference lists in APA-style</li> </ul>
<b>B5</b>	<p><i>The student is able to reflect on <b>ethical and societal</b> aspects of the IEM domain and work field</i></p> <p>The student:</p> <ul style="list-style-type: none"> <li>• Can reflect on own behaviour in a professional context</li> <li>• Can detect General Data Protection Regulation and confidentiality issues and analyse ethical implications of using research methods and technologies</li> </ul>
<b>B6</b>	<p><i>The student is able to reflect on and direct <b>personal and professional behaviour and development</b></i></p> <p>The student:</p> <ul style="list-style-type: none"> <li>• The student is able to manage and concretize own learning processes in the context of “lifelong learning”</li> <li>• Can create an innovative learning portfolio by selecting and describing learning and development goals the student wants to pursue</li> </ul>
<b>B7</b>	<i>Has sufficient knowledge and competencies to pursue a PhD or EngD, and work in the IEM domain.</i>