

# Master in Life Sciences

A cooperation between  
BFH, FHNW, HES-SO, ZFH

<b>Module title</b>	<b>Innovation and Project Management</b>																																																	
<b>Code</b>	B3																																																	
<b>Degree Programme</b>	Master of Science in Life Sciences																																																	
<b>Workload</b>	3 ECTS (90 student working hours) - Lessons contact (total 42 of which 28 central teaching): 32 h - Self-study: 58 h																																																	
<b>Module Coordinator</b>	<b>Name:</b> Dr. Robert Vorburger <b>Phone:</b> +41 58 934 54 72 <b>Email:</b> <a href="mailto:robert.vorburger@zhaw.ch">robert.vorburger@zhaw.ch</a> <b>Address:</b> ZHAW Life Sciences und Facility Management, Einsiedlerstrasse 31a, 8820 Wädenswil																																																	
<b>Lecturers</b>	Dr. Robert Vorburger, ZHAW																																																	
<b>Entry requirements</b>	Module B1 "Business Administration for Life Sciences" recommended Module B2 "Business Management and Leadership for Life Sciences" recommended																																																	
<b>Learning outcomes and competences</b>	After completing the module, students will be able to: <ul style="list-style-type: none"> <li>• differentiate between innovation and creativity</li> <li>• understand the role of innovation management within a company</li> <li>• apply internationally approved project management methodologies</li> <li>• apply internationally approved requirements engineering techniques</li> <li>• differentiate between quality management and risk management</li> <li>• include patent law and intellectual property rules in new business opportunities.</li> </ul>																																																	
<b>Module contents</b>	<ul style="list-style-type: none"> <li>• <i>Creativity Techniques:</i> Different methods to encourage creativity, including techniques for idea generation and divergent thinking</li> <li>• <i>Innovation Management:</i> How to shape a creative idea into a product or business model. The role of innovation management within a company</li> <li>• <i>Requirements Engineering:</i> Identify and specify the needs as soon and as exact as possible. General techniques of requirement engineering such as phrasing, categorising, and tracing of requirements</li> <li>• <i>Project Management:</i> Internationally approved sequential as well as agile project management methodologies, e.g. waterfall model and SCRUM, respectively.</li> <li>• <i>Quality Management:</i> International standards (e.g. ISO), validation and verification, common ground with risk management</li> </ul>																																																	
<b>Teaching / learning methods</b>	This module has the following structure: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Week</th> <th>&lt;1</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>&gt;7</th> </tr> </thead> <tbody> <tr> <td><b>Central</b></td> <td></td> <td>4L</td> <td>8L</td> <td></td> <td>8L</td> <td></td> <td>8L</td> <td></td> <td></td> </tr> <tr> <td><b>Local</b></td> <td></td> <td>2L</td> <td></td> <td>4L</td> <td></td> <td>4L</td> <td></td> <td>4L</td> <td></td> </tr> <tr> <td><b>Self-study</b></td> <td>20h</td> <td colspan="6">18h</td> <td></td> <td>20h</td> <td></td> </tr> </tbody> </table> <p>A project builds the core of the module. The mission is to develop and manage a product or a service.</p>									Week	<1	1	2	3	4	5	6	7	>7	<b>Central</b>		4L	8L		8L		8L			<b>Local</b>		2L		4L		4L		4L		<b>Self-study</b>	20h	18h							20h	
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	<p>During the central teaching lessons, techniques, methods, and concepts are presented and discussed. Additional material for self-study will be provided to build a deeper understanding of the topics.</p> <p>In line with the topics covered in the central lessons, a project is implemented in the decentral lessons. The students work together in small groups. In a first phase, the students will apply innovation techniques to come up with a product/service idea and will compile a business model canvas around the product/service. In the second phase, PM techniques will be applied to plan the development and production of the product.</p> <p>The project consists of milestones. Simulating a peer-reviewed process, each group reviews and discusses the progress of two other groups. The review further strengthens the understanding by offering a different point of view.</p> <p>The role of the teacher shifts in the decentral lessons from a lecturer to a coach.</p>
<b>Assessment of learning outcome</b>	<ol style="list-style-type: none"> <li>1. Final written exam, open book (on methodologies) (70%)</li> <li>2. Three assignments during the module; to be handed in within 2 weeks each (30%)</li> </ol>
<b>Format</b>	7-weeks
<b>Timing of the module</b>	<p>For ZHAW and FHNW: Spring semester, CW 15-21</p> <p>For BFH and HES-SO: Autumn semester, CW 45-51</p>
<b>Venue</b>	<p>For ZHAW and FHNW: Olten</p> <p>For BFH and HES-SO: Fribourg</p>
<b>Bibliography</b>	<p>Project Management Handbook Kuster, J., Huber, E., Lippmann, R., Schmid, A., Schneider, E., Witschi, U., Wüst, R Springer-Verlag, 2015</p> <p>The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm Kelly Tom Crown Publishing Group, 2007</p>
<b>Language</b>	English
<b>Links to other modules</b>	Quality management is related to a company's <i>organisation</i> and, in particular, to <i>controlling and reporting</i> which is part of module B2.
<b>Comments</b>	Material treated during local teaching is relevant for the exam.
<b>Last Update</b>	17.09.2019