

# Framework Timetable Applied Computational Life Sciences

## Autumn Semester

## Spring Semester

CW38-44		
Mon-Tues (Wädenswil and online)	Thursday (Olten and online)	Friday (online)
V5_1 Programming Algorithms and Data Structures	CO1 Modelling of Complex Systems (Olten)	D1 Handling and Visualising Data
V5_2 Mathematical Modelling	F6 Journal Club "Food and Nutrition Sciences" (Berne)	D4 Data and Ethics
V5_9 Advanced Deep Learning	BP1 Compound Profiling in Pharmaceutical Drug Discovery (Olten)	
	C1 Materials Science (Olten)	
	E1 Journal Club Environmental and Natural Resource Sciences (Berne)	

CW08-14		
Mon-Tues (Wädenswil and online)	Thursday (Berne/Olten and online)	Friday (online)
V5_4 Databases and Data Architecture Systems	CO3 Optimisation and Bio-Inspired Algorithms (Olten)	B1 Business Administration for Life Sciences
V5_6 Neural Networks and Deep Learning	F3 Foodomics (Berne)	B2 Management and Leadership for Life Sciences
V5_8 Computational Life Science Seminar	BP5 Physiology and Immunotherapies (Berne)	
	C4 Green Chemistry (Olten)	
	E5 Biodiversity (Berne)	

<b>Comment</b>	- Modules can be attended in the same semester	<b>Attention:</b> Modules can <b>not</b> be attended in the same semester	- Modules can be attended in the same semester <b>Attention:</b> decentralized Teaching takes place on Tuesday morning in Wädenswil
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CW45-51		
Mon-Tues (Wädenswil and online)	Thursday (Olten and online)	Friday (online)
V5_1 Programming Algorithms and Data Structures	5 (CO2) Machine Learning and Pattern Recognition (Olten)	D2 Design and Analysis of Experiments
V5_2 Mathematical Modelling	BP8 Physicochemical Principles in Pharmaceutics (Olten)	D3 Modelling and Exploration of Multivariate Data
V5_9 Advanced Deep Learning	C2 Surface Characterisation (Olten)	
	E2 Life Cycle Assessment (Berne)	

CW15-21		
Mon-Tues (Wädenswil and online)	Thursday (Olten and online)	Friday (online)
V5_4 Databases and Data Architecture Systems	CO4 Imaging for the Life Sciences	B3 Innovation and Project Management
V5_6 Neural Networks and Deep Learning	F4 Sustainable Food Supply Chains (Olten)	B4 Politics and Society
V5_8 Computational Life Science Seminar	BP6 Tissue Engineering for Drug Discovery (Olten)	
	C5 Chemistry and Energy (Olten)	
	E6 Water Management for Households, Industry and Agriculture (Olten)	

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CW04	CW06
whole week	whole week
F1 Progress in Food Processing (Sion)	F2 Nutrition and Nutrition Related Chronic Diseases (Olten)
BP3 Design of Biopharmaceutical Production Facilities (Wädenswil)	BP7 Bioanalytics in a Regulated Environment (MuttENZ)
E3 Sustainable Natural Resource Management (Zollikofen)	C3 Polymers and Applications (Fribourg)
	E4 Ecological Infrastructure in Landscapes (Geneva)

CW23
whole week
F5 Advanced Sensory Techniques (Changins)
BP4 Regulatory Affairs (Sion)
C6 Industrial Chemical Process Safety (Fribourg)

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<b>Core Competences (D: Data / B: Business)</b>	4 modules / at least 12 ECTS <b>Compulsory</b> D1, D2, D3
<b>Cluster-specific modules</b>	3 modules / at least 9 ECTS in the category Computation: CO1-CO4 <b>Compulsory</b> CO1, CO3
<b>Cluster-specific modules from other areas</b>	all modules from the other areas
<b>Total cooperation modules</b>	<b>24-30 ECTS</b>
<b>Specialisation skills</b>	<b>Compulsory</b> V5_1 - V5_7 <b>Elective</b> V5_8, V5_9
<b>Total specialisation skills</b>	<b>30-36 ECTS</b>
<b>Master's thesis</b>	<b>Compulsory</b> Milestone 1-3
<b>Total Milestones (Master's thesis)</b>	<b>30 ECTS</b>
<b>Required number of ECTS for completion</b>	<b>90 ECTS</b>