

# Master in Life Sciences

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

<b>Module title</b>	<b>Nutrition and Nutrition Related Chronic Diseases</b>
<b>Code</b>	F2
<b>Degree Programme</b>	Master of Science in Life Sciences
<b>Group</b>	Food
<b>Workload</b>	3 ECTS (90 student working hours: 42 lessons contact = 32 h; 58 h self-study)
<b>Module Coordinator</b>	<p><b>Name:</b> Dr. Leonie Bogl  <b>Phone:</b> +41 31 848 47 12  <b>E-Mail:</b> <a href="mailto:leonie-helen.bogl@bfh.ch">leonie-helen.bogl@bfh.ch</a>  <b>Address:</b> Berner Fachhochschule Gesundheit, Fachbereich Ernährung und Diätetik, Finkenhubelweg 11, 3012 Bern</p>
<b>Lecturers</b>	<ul style="list-style-type: none"> <li>• Dr. Leonie Bogl, BFH</li> <li>• Dr. David Fäh, BFH</li> <li>• Dr. Samuel Mettler, BFH</li> <li>• Guest speaker(s) / Assistant(s) to be announced</li> </ul>
<b>Entry requirements</b>	At least one module at bachelor level with nutrition-related contents and one with basic statistics.
<b>Learning outcomes and competences</b>	<p>After completing the module, students will be able to:</p> <ul style="list-style-type: none"> <li>• Summarize main characteristics and impacts of nutrition-related chronic diseases (the 4 main NCDs).</li> <li>• Describe the main characteristics of healthy versus unhealthy diets; nutritional recommendations and what people actually eat; and key determinants of dietary behaviour and health.</li> <li>• Critically discuss the evidence linking diet (nutrition-related exposures) with increased or decreased risk of NCDs, and the different perspectives on physical activity / inactivity.</li> <li>• Identify and assemble in a diagram the most important factors contributing to NCDs and discuss their interactions.</li> <li>• Propose new approaches to tackle NCDs and promote health.</li> </ul>
<b>Module contents</b>	<p>The course aims to develop an understanding about the role of diet in maintaining health and preventing disease, and impacts on public health, considering the four major NCDs. A holistic approach will be promoted as students explore the following topics:</p> <ul style="list-style-type: none"> <li>• Healthy/unhealthy diet; plant-based diet, dietary patterns versus food group /nutrient-focus; new approaches to dietary assessment</li> <li>• Basic theory for selected NCDs (obesity, type 2 diabetes, cardiovascular diseases, specific types of cancer).</li> <li>• Physical activity / inactivity and health outcomes.</li> <li>• Some insights about the microbiome as related to NCDs.</li> <li>• Basic terminology in nutrition epidemiology (e.g. study designs; associations and causation)</li> </ul>
<b>Teaching / learning methods</b>	<p>Lecture and assignments, emphasizing critical thinking and student-centered learning</p> <ul style="list-style-type: none"> <li>• Pre-course slidecasts and readings, must be completed before the course.</li> <li>• Individual / group activities, based on theory and readings</li> </ul>

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<b>Assessment of learning outcome</b>	1. Written final exam: 40 % - closed book 2. Group project: 60 %																								
<b>Format</b>	Block week																								
<b>Timing of the module</b>	Winter school CW 6 <table border="1"> <thead> <tr> <th>Day of the block week</th> <th>&lt;1</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>&gt;5</th> </tr> </thead> <tbody> <tr> <td>Contact teaching (lessons)</td> <td></td> <td>8</td> <td>9</td> <td>9</td> <td>8</td> <td>8</td> <td></td> </tr> <tr> <td>Self-study (hours)</td> <td>20</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>0</td> <td>30</td> </tr> </tbody> </table>	Day of the block week	<1	1	2	3	4	5	>5	Contact teaching (lessons)		8	9	9	8	8		Self-study (hours)	20	2	2	2	2	0	30
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Self-study (hours)	20	2	2	2	2	0	30																		
<b>Venue</b>	BFH, HAFL, Zollikofen																								
<b>Bibliography</b>	<p><u>Pre-course reading</u>  Slidecasts and other materials for course preparation will be uploaded on the Moodle course, including selected research papers and weblinks.</p> <p>Diet Collaborators 2019: Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet 393:1958-72</p> <p>Global Nutrition Report, 2017. Nourishing the SDGs, Bristol, UK: Development Initiatives: (summary and chapters 1-2).</p> <p>Bassaganya-Riera et al. 2021. Goals in Nutrition Science 2020-2025 Frontiers in Nutrition.</p> <p>Key et al. 2020 Diet, nutrition, and cancer risk: what do we know and what is the way forward. BMJ 2020.</p> <p>Lieberman 2015 Is Exercise really medicine: an evolutionary perspective. Current Sports Medicine Reports.</p> <p>Cade 2017 Measuring diet in the 21st century: use of new technologies. 76, 276-282.</p> <p>Willett W, 2012. Nutritional epidemiology (third edition), Publisher: Oxford University Press, (Chapters 1-5).</p>																								
<b>Language</b>	English																								
<b>Links to other modules</b>	-																								
<b>Comments</b>	-																								
<b>Last Update</b>	26.06.2025																								