

Master in Life Sciences

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

Module title	Nutrition and Nutrition Related Chronic Diseases
Code	F2
Degree Programme	Master of Science in Life Sciences
Group	Food
Workload	3 ECTS (90 student working hours: 42 lessons contact = 32 h; 58 h self-study)
Module Coordinator	<p>Name: Janice Sych Phone: +41 (0)58 934 59 90 E-Mail: janice.sych@zhaw.ch Address: ZHAW Life Sciences und Facility Management, Einsiedlerstrasse 34, 8820 Wädenswil</p>
Lecturers	<ul style="list-style-type: none"> • Dr. Janice Sych, ZHAW • Dr. David Fäh, BFH • Dr. Samuel Mettler, BFH • Guest speaker(s) / Assistant(s) to be announced
Entry requirements	At least one module at bachelor level with nutrition-related contents and one with basic statistics.
Learning outcomes and competences	<p>After completing the module, students will be able to:</p> <ul style="list-style-type: none"> • Summarize main characteristics and impacts of nutrition-related chronic diseases (the 4 main NCDs). • Describe the main characteristics of healthy versus unhealthy diets; nutritional recommendations and what people actually eat; and key determinants of dietary behaviour and health. • Critically discuss the evidence linking diet (nutrition-related exposures) with increased or decreased risk of NCDs, and the different perspectives on physical activity / inactivity. • Identify and assemble in a diagram the most important factors contributing to NCDs and discuss their interactions. • Propose new approaches to tackle NCDs and promote health.
Module contents	<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"> • Healthy/unhealthy diet; dietary patterns versus food group /nutrient-focus; new approaches to dietary assessment • Basic theory for selected NCDs (obesity, diabetes type 2, cardiovascular diseases, specific types of cancer). • Physical activity / inactivity and health outcomes. • Some insights about the microbiome as related to NCDs. • Basic terminology in nutrition epidemiology (e.g. study designs; associations and causation)
Teaching / learning methods	<p>Lecture and assignments, emphasizing critical thinking and student-centered learning</p> <ul style="list-style-type: none"> • Pre-course slide casts and readings, must be completed before the course.

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	<ul style="list-style-type: none"> Individual / group activities, based on theory and readings 																								
Assessment of learning outcome	<ol style="list-style-type: none"> Written final exam: 40 % - closed book Group project: 60 % 																								
Format	Block week																								
Timing of the module	Winter school CW 6 <table border="1"> <thead> <tr> <th>Day of the block week</th> <th><1</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>>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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Contact teaching (lessons)		8	9	9	8	8																			
Self-study (hours)	20	2	2	2	2	0	30																		
Venue	Olten																								
Bibliography	<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>																								
Language	English																								
Links to other modules																									
Comments																									
Last Update	01.04.2024																								