<table>
<thead>
<tr>
<th><strong>Module</strong></th>
<th><strong>Bioactive Food Ingredients</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong></td>
<td>MSLS_FNH-5</td>
</tr>
<tr>
<td><strong>Degree Program</strong></td>
<td>Master of Science in Life Sciences (MSLS)</td>
</tr>
<tr>
<td><strong>ECTS Credits</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Workload</strong></td>
<td>150 h: Contact: 71 h, self-study: 79 h</td>
</tr>
</tbody>
</table>
| **Module Coordinator** | Name: Wilfried Andlauer  
Phone: 027 606 86 37  
Email: Wilfried.andlauer@hevs.ch  
Address: Route du Rawyl 47, 1950 Sion |
| **Lecturers** | • Dr. Agnieszka Kosinska Cagnazzo  
• Guest lecturers |
| **Entry Requirements** | Bachelor of Science in Food Technology, in Nutrition or in a related course of study  
Knowledge of the principles of food chemistry as well as human nutrition and metabolism. |
| **Learning Outcomes and Competences** | After completing the module students will:  
• have the knowledge the bioavailability and bioactivity of major and minor food ingredients  
• be able to evaluate analytical approaches and techniques for biological activity of food ingredients  
• be aware of new trends in functional food development  
• be able to evaluate current literature in nutrition and food science |
| **Module Content** | The module covers selected topics of the wide field of bioactive food ingredients.  
Firstly, background, definitions, and classification of functional food will be introduced. Then the nature, sources and biological functions of bioactives from major and minor food ingredients will be presented. The bioactives covered will include: carbohydrates, proteins, lipids, and phytochemicals such as phenolic compounds, carotenoids and phytosterols. The focus will be brought to the bioavailability and the mechanism of action. The overview on analytical approaches and techniques to access biological activity of food ingredients will be presented. |
| **Teaching / Learning Methods** | • Lectures and seminars with presentations by students  
• Exercises individually and in groups  
• Discussion on current trends in functional food |
| **Assessment of Learning Outcome** | • Seminar presentations and contributions to discussions (30 %)  
• Oral examination at the end of the module (70 %) |
• Nelson DL, Cox MM, Lehninger AL, 2008. Lehninger principles of biochemistry |
<table>
<thead>
<tr>
<th>Language</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Update</td>
<td>24.03.2017 / Wilfried Andlauer</td>
</tr>
</tbody>
</table>

- Selected research articles on functional food ingredients will be posted on the moodle platform.