

# Human factors and ergonomics

## C2



Sven Hoffmann

<b>Aim</b>	<p>The field of workplace ergonomics evaluates the characteristics of human beings, their resources, and demands in respect of their working tasks, working environment, and working organization. The field further aims to evaluate work-associated risk factors and possible health hazards. It fosters healthy workspaces, e.g. through developing and optimizing human-machine interfaces, enhancing the usability of tools, and eliminating obstacles in working systems.</p> <p>Upon completion of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand and apply main human physiological and psychological functioning and limitations</li> <li>• Analyze work tasks, tools, and working environments</li> <li>• Assess ergonomic risk factors at work</li> <li>• Evaluate individual balances of work demands and resources</li> </ul>
<b>Contents</b>	<ul style="list-style-type: none"> <li>• Introduction to work physiology</li> <li>• Basics of work psychology (human reliability and work-load management)</li> <li>• Basics of work-related anthropometry and physical performance</li> <li>• Ergonomic assessment tools and checklists</li> <li>• Concepts of hazard, health risk, health resource, stress and strain</li> <li>• Practical training in ergonomic risk assessment</li> <li>• Introduction to design of work, working environments, and work organization</li> </ul>
<b>Methods</b>	Case studies; Lectures; Group work; Discussion round
<b>ECTS credits</b>	2 ECTS credits = approx. 60 hours of workload including 40 hours of on-campus lectures and 20 hours of pre-assignment and exam
<b>Target audience</b>	<ul style="list-style-type: none"> <li>• Students in the DAS Work+Health program</li> <li>• Future and current work and health specialists</li> <li>• Healthcare providers and other persons interested in work and health</li> </ul>
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<b>Administration</b>	Monika Rettke; monika.rettke@uzh.ch
<b>Dates and location</b>	11–15 April 2016 in Zurich
<b>Fee</b>	CHF 3 400.–
<b>Registration deadline</b>	28 February 2016