

Module number	Module name	Professor in charge
	Hydraulic Engineering	Prof. Stamm
Contents and qualification aims	<p>On the basis of the hydrological water cycle hydraulic structures for flood protection (levees, water retention reservoirs), for use of water (weirs, dams, water power stations) are discussed with respect to water management, ecological and economic aspects. Environmental friendly structures, sustainability and renewable energies are dealt with emphasis. In addition navigation engineering are also reported.</p> <p>The aim of qualification is achieve knowledge about the design, operation and calculation of hydraulic structures</p>	
Teaching form	<p>2 hours a week lectures, Stamm 1 hour a week tutorial, 1 hour a week lab training, Haufe</p>	
Pre-requisite of attendance	<p>knowledge in physics, higher mathematics Literature: Novak,P.; Moffat, A.I.B.; Nalluri, C.; Narayanan, R. Hydraulic Structures, (1996), ISBN 0-419-20070-3 Hasen, H.; Zipparr, V.J.Davis Handbook of Applied Hydraulics, (1993), ISBN 0-07-073002-4 Sentürk, F.: Hydraulics of Dams and Reservoirs, WRP, 1994, ISBN 0-918334-80-2</p>	
Usage	<p>The module is a mandatory module and especially designed for students in environmental sciences and civil engineering. The contents are harmonised with the parallel course hydromechanics. The student work is jointly organised with hydromechanics.</p>	
Pre-requisite to achieve credit points	<p>The credit points are earned if the student passes the module exam. The module exam is a written exam, 90 minutes, a study work (30 hours) is a pre-requisite to participate in the exam.</p>	
Credit points and marks	<p>The module earns 5 cr.</p>	
Frequency of the module	<p>The module is offered each winter semester. The module mark is identical to the exam mark.</p>	
Work load	<p>The student's work load is 150 hours.</p>	
Duration of the module	<p>The module is finished in one semester.</p>	