Hochschule München University of Applied Sciences

Courses in English
Course Description

Department	02 Civil Engineering
Course title	**Modern Monuments in Worldwide Civil Engineering**
Course number	800
Hours per week (SWS)	4
Number of ECTS credits	5
Course objective	The students shall get familiar with extraordinary structures and techniques in the world, experiencing the potentialities in civil engineering.They will be also trained in specail terminology of civil engineering.
Prerequisites	Basic knowledge in civil engineering or technical mechanics
Recommended reading	Lecture script (units 1 to 8 available in MOODLE)
Teaching methods	Lectures, tutorials
Assessment methods	Short presentation (usually by Powerpoint, 10 min duration)
Language of instruction	English
Name of lecturer	Prof. Dr.Ing. Günter Gäßler
Email	guenter.gaessler@hm.edu
Link	
Course content	Invention of reinforced concrete by Monier and its material properties; first bridges in iron and reinforced concrete; Marina City - a fascinating modern concrete building in Chicago; Highlights of suspension bridges and cable-stayed bridges worldwide: e.g., Brooklyn Bridge and Golden Gate Bridge in USA, Great belt Bridge in Denmark, Akashi-Kaikyo-Bridge in Japan; suspension bridges spanning the Bosphoros as well as the Dardenelles; Collapse of the first Tacoma Narrows Bridge and rebuilding of new ones in USA; Gigantic massiv concrete arch and gravity dams with hydroelectric power plants: Hoover Dam in USA and Itaipu in Brazil; Walchensee power plant in Bavaria; Invention and development of a new technique in ground engineering: Soil Nailing; Presentation of large soil nailing projects all over the world; the rise of high urban steel framed and concretete constructions: e.g., Empire State Building, Freedom Tower in NYC, and Burj Khalifa in Dubai.
Remarks	All lectures are illustrated by photographs (mostly personally taken on site), documentary videos and films as well as Powerpoint presentations; special exercises to articulate mathematical equations, functions, and technical units.