

Proposed Double Master's Degree between Universiti Teknologi MARA and University of Stuttgart

This MACROPLAN depicts the 2-year MSc double degree structure in **Water Resources Engineering at UiTM** and in **Water Resources Engineering and Management (WAREM) at University of Stuttgart**. It shows the **compulsory** and elective courses in each course for students wishing to spend their 2nd year at the partner institution.

1. Semester		2. Semester		3. Semester		4. Semester	
UiTM student in UiTM	Stuttgart student in Stgt.	UiTM student in UiTM	Stgt. student in Stgt.	UiTM student in Stgt.	Stgt. student in UiTM	UiTM student in Stgt.	Stgt. student in UiTM
Sustainability Management (2 ECTS-M)	Chemistry and Biology for Environmental Engineers (6 ECTS-S)	Environmental Assessment (4 ECTS-M)	Urban Drainage and Design of wastewater Treatment Plants (6 ECTS-S)	German Language (3 ECTS-S)	Sustainability Management (2 ECTS-M)	Master's Thesis (30 ECTS-S)	Master's Thesis (23,5 ECTS-M)
Risk Management (2 ECTS-M)	Sanitary Engineering (6 ECTS-S)	German Language (2 ECTS-M)	Requirements of Prof. Life and Engineering in Practice (2) (1,5 ECTS-S)	Requirements of Prof. Life and Engineering in Practice (1) (1,5 ECTS)	Risk Management (2 ECTS-M)		
Water Resources Planning and Management (4 ECTS)	Environmental Fluid Mechanics I (6 ECTS-S)	Choose FOUR (4) out of the following:	German Language or key Qualification (3 ECTS-S)	Choose FOUR (4) from the following:	Water Resources Planning & Management (4 ECTS-M)	Requirements of Prof. Life and Engineering in Practice (2) (1,5 ECTS)	
German Language (2 ECTS)	Hydraulic Structures (1), (3 ECTS-S)*	Erosion and Sedimentation (4 ECTS-M)	Hydraulic Structures (2), (3 ECTS-S)	Industrial Waste Water (6 ECTS-S)	Third Language (not German or English) (2 ECTS-M)		
Choose THREE (3) from the following:	Requirements of Prof. Life and Engineering in Practice (1) (1,5 ECTS-S)*	Flood Management and Mitigation (4 ECTS-M)	Choose THREE (3) from the following:	Data, Statistics and Optimization (6 ECTS-S)	Choose THREE (3) from the following:		
Erosion and Sedimentation (4 ECTS-M)	German Language or key qualification (3 ECTS-S)	Coastal & Harbour Engineering (3 ECTS-M)	Constructed Wetlands for Waste Water Treatment (3 ECTS-S)	Environmental Fluid Mechanics I (6 ECTS-S)	Erosion & Sedimentation (4 ECTS-M)		
Flood Management and Mitigation (4 ECTS-M)	Choose Two (2) from the following:	Environmental Monitoring (4 ECTS-M)	Regional and Urban Planning 2 (6 ECTS-S)	Geohydrology and Geoengineering (6 ECTS-S)	Flood Management and Mitigation (4 ECTS-M)		
Coastal and Harbour Engineering (4 ECTS-M)	Water and Power Supply (6 ECTS-S)	Advanced Water Supply (4 ECTS-M)	Intergrated Watershed Modelling (6 ECTS-S)	Water Resources and Irrigation- Planning Methods and Tools (6 ECTS-S)	Coastal and Harbour Engineering (4 ECTS-M)		
Environmental Monitoring (4 ECTS-M)	Regional and Urban Planning 1 (6 ECTS-S)	Membrane Technology for Water and Waste Water Treatment (4 ECTS-M)	Modelling of Hydrosystems (6 ECTS-S)	Groundwater and Soil Remediation (6 ECTS)	Environmental Monitoring (4 ECTS-M)		
Advanced Water Supply (4 ECTS-M)	Data, Statistics and Optimization (6 ECTS-S)	Air Pollution (4 ECTS-M)	Integrated River Management and Engineering (6 ECTS-S)	Stochastical Modelling and Geostatistics (6 ECTS)	Advanced Water Supply (4 ECTS-M)		
Membrane Technology for Water and Waste Water Treatment (4 ECTS-M)	Geohydrology and Geoengineering (6 ECTS-S)	Groundwater Pollution and Engineering (4 ECTS-M)	Hydrogeological Investigations (6 ECTS-S)		Membrane Technology for Water and Waste Water Treatment (4 ECTS-M)		
Air Pollution (4 ECTS-M)			Environmental Fluid Mechanics II (6 ECTS-S)		Air Pollution (4 ECTS-M)		
Groundwater Pollution and Engineering (4 ECTS-M)					Groundwater Pollution and Engineering (4 ECTS-M)		
22 ECTS-M (ca. 880 hrs)	30 ECTS-S (ca. 900 hrs)	22 ECTS-M (ca. 880 hrs)	30 ECTS-S (ca. 900 hrs)	30 ECTS-S (ca. 900 hrs)	22 ECTS-M (ca. 880 hrs)	30 ECTS-S (ca. 900 hrs)	23,5 ECTS-M (ca. 940 hrs)

(1) the modules "Requirements of Professional Life and Engineering in Practice" 3 ECTS) and "Hydraulic structures" (6 ECTS) are divided into 2 semesters. The ECTS can only be acquired if both parts have been completed

Compulsory modules in bold. ECTS-M: as at UiTM ECTS-S: as at U Stuttgart

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