Modules "MSc. Transportation Systems" - FPSO 20161

December 17, 2020

Semester															Semesster
	R e q u i r e d m o d u l e s														
1 WS	**Sustainable Transportation**	Tsakarestos 7 SWS/ 9 Cr BGU56047D2	**Analysis Methods- Statistics and GIS**	4 SWS/ 6 Cr BV580010	**Land-Use and Transport - Strategies and Models**	4 SWS/ 6 Cr BV520010	**Infrastructure Planning**	5 SWS/ 6 Cr BV340009	**Traffic Management**	Dumler/Dandl 4 SWS/ 6 Cr BV560024	**Cross-Cutting Fundamentals and Methods**	2 SWS/ 3 Cr BGU56038			**1 WS**
	C1: Transport and the Environment	Tsakarestos	C1: Applied Statistics in Transport	Antoniou	C1: Transport Planning Models	Wulfhorst	C1: Kinematics and Dynamics of Driving	Lechner	C1: Traffic Flow Models (LI)	Bogenberger, Tilg	C1: Scientific Paper Writing	Chigbu			
												C2: Intercultural Aspects of Transportation Management	Vierling			
	C2: Tranport Sociology and Psychology	Conti, Moeckel	C2: Geographic Information Systems (GIS)	Meng	C2: Interactions of Land-Use and Transport	Wulfhorst, Büttner			C2: Traffic Control Basics (LI)	Bogenberger, Amini					
2 SS	**Sustainable Transportation**	Tsakarestos 7 SWS/ 9 Cr BGU56047D2	**Transport Concepts and Implementation**	Prof. SV 4 SWS/ 6 Cr BGU52014	**Transportation Systems in Germany**	2 SWS/ 3 Cr BGU56039	**Infrastructure Planning**	5 SWS/ 6 Cr BV340009							**2 SS**
	C3: Transport Economy and System Assessment (Lecture)	Fehn/Tilg	C1: Public Transport Concepts	Tsakarestos	C: Transportation Systems in Germany	Vierling	C2: Infrastructure Design	Lechner							
	C4: Transport Economy and System Assessment (Exercise)	Fehn/Tilg	C2: Transportation Policies and Project Design	Wulfhorst, Mitarbeiter											
3 WS	**Project Seminar**	3 SWS/ 10 Cr BV52003	**Internship (credit requirement)**	5 Cr BV00PKTS												**3 WS**
	Project Seminar	Focus Area "Mobility and Transportation Systems"	Internship	Focus Area "Mobility and Transportation Systems"											
4 SS	**Master's Thesis**	6 Months/ 30 Cr BV00MTTS														**4 SS**
	Master's Thesis	Focus Area "Mobility and Transportation Systems"													

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Semester	Required elective modules (specializations)				Semester
1 WS					**1 WS**
2 SS	**Transportation Demand Management (Field of Study III)**	5 SWS/ 6 Cr BV520002	**Intelligent Transport Systems (Field of Study II)**	Grigoropoulos 4 SWS/ 6 Cr BV560023	**2 SS**
	C1: Modelling in Integrated Land-use and Transport Systems	Wulfhorst	C1: Traffic Control - Extension (VI)	Bogenberger/ Grigoropoulos	
	C2: Seminar	Wulfhorst			
3 WS	**Road and Rail Design (Field of Study I)**	6 SWS/ 6 Cr BV340019	**Intelligent Transport Systems (Field of Study II)**	Grigoropoulos 4 SWS/ 6 Cr BV560023	**3 WS**
	C1: Road Design	Lechner	C2: ITS System Architectures and Applications	Antoniou	
	C2: Rail Design	Lechner			
4 SS					**4 SS**

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Elective modules

Semester 1 WS

Module	Details
Computer Aided Traffic Engineering with Matlab	2 SWS/3 Cr, BV610020, Neidhardt
Urban Ropeways	2 SWS/3 Cr, BGU56056, Bogenberger
Applied Transport Planning in Developing Countries	2 SWS/3 Cr, BGU 68009, Moeckel
Accessibility Planning	2 SWS/3 Cr, BGU 52020, Wulfhorst

Semester 2 SS

Module	Details
Construction of Traffic Infrastructure	3 SWS/3 Cr, BV 340008, Lechner
Instruments of Land Mobilisation	3 SWS/3 Cr, BV400021, de Vries
Traffic Control - Extension	2 SWS/3 Cr, BV 560006, Bogenberger/Mitarbeiter
Autonomous Vehicles and Transportation Systems	3 SWS/3 Cr, BGU 56055, Bogenberger/Gastreferenten
Traffic Data - Collection and Analysis	3 SWS/3 Cr, BGU 56048, Spangler
Mulitmodal and intermodal freight transport	4 SWS, BGU70002, Antoniou
Optimization for Transportation Systems	4 SWS, BGU70003, Antoniou
Applied Transport Modeling with MATSim	4 SWS 6 Cr, BGU68012, Antoniou
Principles of Project Management	3 SWS/3 Cr, BV 000063, Zimmermann
Modeling of Integrated Land-use and Transport Systems	3 SWS/3 Cr, BV520001, Wulfhorst
Evaluation of Transport Projects ad Policies	2 SWS/3 Cr, BGU 52016, Wulfhorst
Modelling of Transport-Related Emissions	3 SWS/3 Cr, BGU 52013, Wulfhorst
Visualization of Spatial Data in Transportation	2 SWS/3 Cr, BGU 52015, Wulfhorst
Urban and Regional Planning	3 SWS/3 Cr, BGU 210013, Wulfhorst
Statistical Learning and Data Analytics for Transportation Systems	2 SWS/3 Cr, BGU70006, Antoniou
Politics for Rocket Scientists: An Introduction to Political Science for Non-Political Scientists	4 SWS 6 Cr, POL00011, Büthe, Antoniou
Traffic Flow Simulation C1: Traffic Flow Simulation-Basics	6 SWS/6 Cr, BGU56059T2, Dandl/Amini
Research Design: How to tackle a Master's Thesis	3 SWS/3 Cr, BGU 68002, Moeckel
Transportation Demand Management (C1, C2)	5 SWS/6 Cr, BV520002, Wulfhorst
Professional Software Development	4 Cr, BGU 65006, Borrmann
Transport Planning and Traffic Engineering Concepts for Electric Mobility	3 SWS/3 Cr, BGU 56041, is expected to be offered from SS22
Intelligent Transport Systems (ITS) C1: Traffic Control Extension	4 SWS/6 Cr, BV560023, Bogenberger/Mitarbeiter
Road Safety	6 SWS 6 Cr, BGU68006, Moeckel/ Antoniou

Semester 3 WS

Module	Details
Traffic Flow Simulation C2: Traffic Flow Simulation-Extension	6 SWS/6 Cr, BGU56059T2, Dandl/Amini
Rail Design	3 SWS/3 Cr, BV340001, Lechner
Air Transport and Airports	2 SWS/3 Cr, BV 340021, Lechner
Principles of Project Management	3 SWS/3 Cr, BV 000063, Zimmermann
ITS-System Architectures and Applications	2 SWS/3 Cr, BGU 56034, Antoniou
Intelligent Transport Systems (ITS) C2: ITS System Architectures and Applications	4 SWS/6 Cr, BV560023, Antoniou
Object-Oriented Programming for Transport Engineers	4 SWS 6 Cr, BGU 68010, Moeckel
Service Concepts and Operation Models for New Mobility Solutions for Mixed-Use Residential Developments	3 SWS/3 Cr, BGU 68011, Moeckel
Transportation Economics	4 SWS/6 Cr, BGU70005, Antoniou
Road Design	3 SWS/3 Cr, BV 340002, Lechner
Public Transport Operations and Supply	3 SWS/3 Cr, BV 560009, Rau (LA)/Tsakarestos
Seminar	2 SWS/3 Cr, BV 520012, Wulfhorst
Computer Aided Traffic Engineering with Matlab	2 SWS/3 Cr, BV 610020, Neidhardt
Urban Infrastructure Design	2 SWS/3 Cr, BV 560028, Grigoropoulos
Local Public Transport Strategy and Organization	3 SWS/3 Cr, BV 580013, Wulfhorst
Spatial Modelling: Tools to evaluate planning strategies	3 SWS/3 Cr, BGU 68001, Moeckel
Governance	3 SWS/3 Cr, BV 560011, Wulfhorst
Public Transcport as Urban Generator (German/English)	2 SWS/3 Cr, AR 30213, Wulfhorst
Road and Rail Design (C1, C2)	6 SWS/6 Cr, BV340019, Lechner
Applied Transport Modelling	2 SWS/3 Cr, BGU68007, Moeckel
Discret Choice Methods for Transportation Systems Analysis	4 SWS/6 Cr, BGU70004, Antoniou
Special Topics on Model Calibration	2 SWS/3 Cr, BGU 70007, Antoniou

Semester 4 SS

Module	Details
Research Design: How to tackle a Master's Thesis	3 SWS/3 Cr, BGU 68002, Moeckel