

SMART CITY SOLUTIONS CURRICULUM: 3 SEMESTERS

Programme Director: Prof. Roland Dieterle



SEMESTER 1 (€ 4.000) URBANISM, BUILDINGS, INFORMATION 30 CP / 30 w.p.s.				SEMESTER 2 (€ 4.000) INFRASTRUCTURE, FINANCE, MANAGEMENT 30 CP / 30 w.p.s.				SEMESTER 3 (€2.000) MASTER THESIS 30 CP / 30 w.p.s.	
MODULE 1 BS BASICS OF SMART SOLUTIONS <i>ML: Prof. Dieterle</i> 6 CP / 6 w.p.s.	MODULE 2 SU SMART URBANISM <i>ML: Dr. Petrin</i> 6 CP / 6 w.p.s.	MODULE 3 SB SMART BUILDINGS <i>ML: Prof. Binder</i> 6 CP / 6 w.p.s.	MODULE 4 IM SMART INFORMATION MODELLING <i>ML: Dr. Seelig</i> 6 CP / 6 w.p.s.	MODULE 5 EM SMART ENERGY & MOBILITY <i>ML: Prof. Dr. Schmidt</i> 6 CP / 6 w.p.s.	MODULE 6 RR SMART RESOURCES & RESILIENCE <i>ML: Prof. Dr. Schmidt</i> 6 CP / 6 w.p.s.	MODULE 7 SF SMART SUSTAINABLE FINANCE <i>ML: Prof. Dr. Popovic</i> 6 CP / 6 w.p.s.	MODULE 8 GM SM. GOVERNANCE, CITIZENS & MANAGEM. <i>ML: Prof. Dr. Rein</i> 6 CP / 6 w.p.s.	MODULE 10 TP MASTER THESIS PROJECT <i>ML: Prof. Dieterle</i> 10 CP / 10 w.p.s.	MODULE 11 MT MASTER THESIS <i>ML: Prof. Dieterle</i> 20 CP / 20 w.p.s.
1.1 CDD Global Climatic & Demographic Developments/ Challenges 1.5 CP / 1.5 w.p.s.	2.1 SCC The Smart City in a Smart Region 1.5 CP / 1.5 w.p.s.	3.1 SAC Smart Architecture Concepts 1.5 CP / 1.5 w.p.s.	4.1 SDC Smart Data Components 1.5 CP / 1.5 w.p.s.	5.1 SEG* Smart Energy Generation 1.5 CP / 1.5 w.p.s.	6.1 SWW* Smart Water & Waste Management 1.5 CP / 1.5 w.p.s.	7.1 FMI Financial Markets & Institutions 1.5 CP / 1.5 w.p.s.	8.1 PPG Principles of Public Policy & Governance 1.5 CP / 1.5 w.p.s.	10.1 TPP Thesis / Project Preparation 2 CP / 2 w.p.s.	11.1 AWP Academic Writing / MT Proposal 3 CP / 3 w.p.s.
1.2 SME Sustainable Macroeconomics 1.5 CP / 1.5 w.p.s.	2.2 SUD Smart Urban Development Principles & Concepts 1.5 CP / 1.5 w.p.s.	3.2 SEC Smart Energy Concepts 1.5 CP / 1.5 w.p.s.	4.2 GIS Geographic Information Systems 1.5 CP / 1.5 w.p.s.	5.2 SGS* Smart Grid Solutions 1.5 CP / 1.5 w.p.s.	6.2 PPR Pollution Prevention & Recovery Strategies (Air, Soil, Water) 1.5 CP / 1.5 w.p.s.	7.2 SFI Sustainable Finance 1.5 CP / 1.5 w.p.s.	8.2 PSS Public Services & Public Sector Management 1.5 CP / 1.5 w.p.s.	10.2 MTP Thesis-Project 8 CP / 8 w.p.s.	11.2 MTT Master Thesis 15 CP / 15 w.p.s.
1.3 CD Societal Developments/ Challenges 1.5 CP / 1.5 w.p.s.	2.3 SSI Smart Social Infrastructure & Accommodation 1.5 CP / 1.5 w.p.s.	3.3 SET Smart Engineering & Technologies 1.5 CP / 1.5 w.p.s.	4.3 CIM City Information Model 1.5 CP / 1.5 w.p.s.	5.3 SMM* Smart Mobility Strategies & Management 1.5 CP / 1.5 w.p.s.	6.3 SUB Smart Urban Biosphere & Habitat (incl. Nutrition) 1.5 CP / 1.5 w.p.s.	7.3 IPF Infrastructure & Project Finance 1.5 CP / 1.5 w.p.s.	8.3 LAM Lean & Agile Management Approaches 1.5 CP / 1.5 w.p.s.		
1.4 SPM Smart City Parameters & Measuring 1.5 CP / 1.5 w.p.s.	2.4 STP Smart Town Planning; Land Policy 1.5 CP / 1.5 w.p.s.	3.4 BIM Planning & Building Processes (incl. BIM, Certification etc) 1.5 CP / 1.5 w.p.s.	4.4 DPS Digital Platforms & Services 1.5 CP / 1.5 w.p.s.	5.4 SEM Smart Operations & Maintenance 1.5 CP / 1.5 w.p.s.	6.4 RSM Resilience Strategies & Measures (Flood, Drought, Sea Level, Hurricane) 1.5 CP / 1.5 w.p.s.	7.4 DFI Digitalization, Financial Innovation & Financial Tech. 1.5 CP / 1.5 w.p.s.	8.4 LSM Leadership & Stakeholder Management 1.5 CP / 1.5 w.p.s.	11.3 TPA MT Presentation & Abstract 2 CP / 2 w.p.s.	
MODULE 9 CS CASE STUDY FOCUS: INTEGRATION OF ALL MODULES <i>ML: Prof. Dieterle & Prof. Dr. Petrin</i> 12 CP / 12 w.p.s.				NOTE: IN ADDITION LECTURERS OF MODULES 1-8 CONTRIBUTE TO SUPERVISION OF RESPECTIVE CASE STUDY CHAPTERS (0.5 OUT OF 1.5 W.P.S. PER LEARNING UNIT) * JOINT LECTURES WITH IITM STUDENTS					
LU 9.1 / CS 1 CASE STUDY 1 FOCUS: URBANISM, BUILDING & INFORMATION 6 CP / 6 w.p.s.			COURSE INTRODUCTION / CASE STUDY INTRODUCTION			LU 9.2 / CS 2 CASE STUDY 2 FOCUS: INFRASTRUCTURE, MANAGEMENT & FINANCE 6 CP / 6 w.p.s.			FINAL CASE STUDY PRESENTATION

ELECTIVES AND DEEPENDINGS

IN ORDER TO ENABLE STUDENTS TO SPECIALIZE AND DEEPEN THEIR KNOWLEDGE, THE CASE STUDYS ALLOW THEM TO DEEPEN THEIR KNOWLEDGE OF DIFFERENT SUBJECT AREA. IN ADDITION, LECTURES OF THE MASTER'S RPOGRAMME INTERNATION PROJECT MANAGEMENT CAN BE ATTENDED TO SPECIALISE IN INDIVIDUAL SUBJECTS. THESE CAN ONLY BE VISITED ADDITIONALLY, NOT IN PLACE OF SMART CITY SOLUTIONS LECTURES. ECTS AND GRADES OF LECTURES FROM IPM CAN NOT BE CONSIDERED IN SCS.

REMARKS

- > **w.p.s.**
Weekly Semester Hours; Teacher's Count
- > **SUPERVISION MT**
0.6 w.p.s. (MTT) plus 0.3 (MTP)
for Supervisors 1 & 2 related to
cohort size 25 students