

SMART CITY SOLUTIONS

CURRICULUM FULL-TIME: 3 SEMESTERS



SEMESTER 1 BASICS, URBANISM, BUILDINGS, INFORMATION 30 CP / 30 w.p.s.				SEMESTER 2 INFRASTRUCTURE, MANAGEMENT, FINANCE 30 CP / 30 w.p.s.				SEMESTER 3 MASTER TESIS 30 CP / 7 w.p.s.
MODULE 1 BS BASICS OF SMART SOLUTIONS ML: Prof. Dr. Belle 6 CP / 6 w.p.s.	MODULE 2 SU SMART URBANISM ML: Prof. Dr. Belle 6 CP / 6 w.p.s.	MODULE 3 SB SMART BUILDINGS ML: Prof. Binder 6 CP / 6 w.p.s.	MODULE 4 IM SMART INFORMATION MODELLING & AI ML: Ostadabbas, M.Sc. 6 CP / 6 w.p.s.	MODULE 5 EM SMART ENERGY & MOBILITY ML: Prof. Dr. Schmidt 6 CP / 6 w.p.s.	MODULE 6 RR SMART RESOURCES & RESILIENCE ML: Prof. Dr. Schmidt 6 CP / 6 w.p.s.	MODULE 7 SF SMART SUSTAINABLE FINANCE ML: Prof. Dr. Popovic 6 CP / 6 w.p.s.	MODULE 8 GM SM. GOVERNANCE, CITIZENS & MANAGEM. ML: Prof. Dr. Belle 6 CP / 6 w.p.s.	MODULE 10 MT MASTER THESIS ML: Prof. Dr. Belle 30 CP / 7 w.p.s.
1.1 CDD Global Climatic & Demogr. Development Challenges DI Ghazal Etminan 1.5 CP / 1.5 w.p.s.	2.1 SCC Smart City & Smart Region Johannes Schwegler, MBA 1.5 CP / 1.5 w.p.s.	3.1 SAC Smart Architecture Concepts Prof. Roland Dieterle 1.5 CP / 1.5 w.p.s.	4.1 SDC Smart Data Components Hamidreza Ostadabbas, M.Sc. 1.5 CP / 1.5 w.p.s.	5.1 SEG ^{IPM} Smart Energy Generation Prof. Dr.-Ing. Benjamin Reuter 1.5 CP / 1.5 w.p.s.	6.1 SWW ^{IPM} Smart Water & Waste Management Jürnjakob Dugge, M. Sc. Dipl.-Ing. M. Eng. Markus Bleier 1.5 CP / 1.5 w.p.s.	7.1 FMI Financial Markets & Institutions Andy Yarahmadi, MBA 1.5 CP / 1.5 w.p.s.	8.1 PPG Principles of Public Policy & Governance Felix Bossner, MA 1.5 CP / 1.5 w.p.s.	10.1 ACW Academic Writing & Smart City Literature Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.
1.2 SME Sustainable Macroeconomics Prof. Dr. Katharina Gapp-Schmeling 1.5 CP / 1.5 w.p.s.	2.2 STP Smart Town Planning & Land Policy Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.	3.2 SEC Smart Energy Concepts Dipl.-Ing. Cathrin Krumrey 1.5 CP / 1.5 w.p.s.	4.2 GIS Geographic Information Systems Prof. Dr.-Ing. Angela Bianco-Vogt 1.5 CP / 1.5 w.p.s.	5.2 SGS ^{IPM} Smart Grid Solutions Dr.-Ing. Tobias Weilbach 1.5 CP / 1.5 w.p.s.	6.2 PPR Pollution Prevention & Recovery Strategies Prof. Dr. Jürgen Breuste 1.5 CP / 1.5 w.p.s.	7.2 SFI Sustainable Finance Prof. Dr. Tobias Popovic 1.5 CP / 1.5 w.p.s.	8.2 PSS Public Services & Public Sector Management Felix Bossner, MA 1.5 CP / 1.5 w.p.s.	10.2 MTP Master Thesis Proposal Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.
1.3 SDC Societal Developments & Challenges Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.	2.3 SSI Smart Social Infrastructure & Housing Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.	3.3 SET Smart Engineering & Technologies Christine von Raven, M.A. 1.5 CP / 1.5 w.p.s.	4.3 CIM City Information Models Dipl.-Ing. Carsten Rönsdorf 1.5 CP / 1.5 w.p.s.	5.3 SMM ^{IPM} Smart Mobility Strategies & Management Dipl.-Ing. Rebecca Heckmann 1.5 CP / 1.5 w.p.s.	6.3 SUB Smart Urban Biosphere & Habitat (incl. Nutrition) Prof. Dr. Jürgen Breuste 1.5 CP / 1.5 w.p.s.	7.3 IPF Infrastructure & Project Finance Prof. Dr. Tobias Popovic 1.5 CP / 1.5 w.p.s.	8.3 LAM Lean & Agile Management Approaches Prof. Dr.-Ing. Jakob von Heyl 1.5 CP / 1.5 w.p.s.	10.3 MTR Master Thesis Research Prof. Dr. Iris Belle 2 CP / 2 w.p.s.
1.4 SPM Smart City Parameters & Measuring Dr. Hans-Martin Neumann 1.5 CP / 1.5 w.p.s.	2.4 SUD Smart Urban Development Principles & Concepts Dr. Haris Piplas 1.5 CP / 1.5 w.p.s.	3.4 BIM Planning & Building Processes, BIM, Certific. Dipl.-Ing. Peter Scheibstock Maroun Aad, M.Eng. 1.5 CP / 1.5 w.p.s.	4.4 DPS Digital Platforms & Services Jonas Merbeth, M. Sc. 1.5 CP / 1.5 w.p.s.	5.4 SOM Smart Operations & Maintenance Dipl.-Ing. Axel Kühn Dipl.-Ing. Johannes Winter 1.5 CP / 1.5 w.p.s.	6.4 RSM Resilience Strategies & Measures Dr.-Ing. Nicole Baron 1.5 CP / 1.5 w.p.s.	7.4 DFI Digitalization, Financial Innovation & Technology Svenja Gillé, B.Sc. 1.5 CP / 1.5 w.p.s.	8.4 LSM Leadership & Stakeholder Management Prof. Dr. Iris Belle 1.5 CP / 1.5 w.p.s.	10.4 MTSC Master Thesis Project in Smart City Solutions Various supervisors 23 CP / 0 w.p.s.
9.1 CS1 CASE STUDY 1 Focus: Urbanism, Building & Information Prof. Dr. Iris Belle, Dr. Hans-Martin Neumann, Mag. Maximilian Hackl 6 CP / 6 w.p.s.				9.2 CS2 CASE STUDY 2 Focus: Infrastructure, Management & Finance Prof. Dr. Iris Belle, Dr. Hans-Martin Neumann, Mag. Maximilian Hackl 6 CP / 6 w.p.s.				10.5 MTPA Master Thesis Presentation & Abstract Prof. Dr. Iris Belle 2 CP / 2 w.p.s.
MODULE 9 CS CASE STUDY FOCUS: INTEGRATION OF ALL MODULES ML: Prof. Dr. Belle 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).				

ELECTIVES

Students can attend lectures of the Master Programme International Project Management (IPM) to specialize in individual subject. Attendance is extracurricular and does not replace of smart city solutions lectures. Credit points and grades earned in IPM do not count towards the SCS grade. Attendance is subject to availability. This does not apply to the mandatory joint courses of Modules 5 and 6.

REMARKS

- > CP
Credit Points (for students)
- > w.p.s.
Weekly semester hours (for lecturers)

- > SUPERVISION MASTER THESIS PROJECT (MTSC)
0.6 w.p.s. per student split among supervisors
- > ^{IPM}
Mandatory joint course with the Master Programme International Project Management (International Infrastructure and Technology Management IITM)