

Educational Workshop on Concrete Science & Advanced Methods for
 Evaluation of Concrete
 October 9-11 , 2019
 at Germann Instruments in Evanston IL

Module	Topic	Start	End
Day 1 - October 9			
	Registration-Coffee	8:00 AM	8:30 AM
0	Welcome and Introductions	8:30 AM	8:55 AM
1	Testing Cores	8:55 AM	9:55 AM
2	Rebound Hammer	9:55 AM	10:25 AM
	Coffee Break	10:25 AM	10:40 AM
3	Pullout Test (LOK-Test, CAPO-Test)	10:40 AM	11:20 AM
4	Pull-off Test	11:20 AM	11:40 AM
	Demonstrations (Pullout, Pull-off)	11:40 AM	12:40 PM
	Lunch	12:40 PM	1:40 PM
5	In-Place Strength-Case Study	1:40 PM	2:05 PM
6	Maturity Method	2:05 PM	3:00 PM
	Coffee Break	3:00 PM	3:15 PM
7	Reinforcement Location (Covermeter GPR)	3:15 PM	4:40 PM
	Demonstration (Covermeter and GPR)	4:40 PM	5:25 PM
	Feed back session	5:25 PM	5:35 PM
Day 2 - October 10			
	Review session	8:15 AM	8:30 AM
8	Introduction to Stress Waves	8:30 AM	9:15 AM
9	Ultrasonic Pulse Velocity	9:15 AM	9:55 AM
	Demonstrations (UPV, Surfer)	9:55 AM	10:15 AM
	Coffee Break	10:15 AM	10:30 AM
10	Impact-Echo Method	10:30 AM	11:20 AM
11	Impulse-Response Method	11:20 AM	11:55 AM
12	Ultrasonic-Echo Method (MIRA)	11:55 AM	12:35 PM
	Lunch	12:35 PM	1:35 PM
	Demonstrations (I-E, I-R, MIRA)	1:35 PM	2:35 PM
13	Principles for Durability, Water Penetration	2:35 PM	3:15 PM
	Coffee Break	3:15 PM	3:30 PM
14	Corrosion Basics, Chlorides, Carbonation	3:30 PM	4:15 PM
	Demonstrations (GWT, RCT)	4:15 PM	4:45 PM
	Feed back session	4:45 PM	4:55 PM
Day 3 - October 11			
	Review session	8:15 AM	8:30 AM
15	Chloride Profile & Service Life Estimation	8:30 AM	9:15 AM
	Demonstrations (Profile Grinder)	9:15 AM	9:30 AM
16	Half-cell Potential, Resistivity & Corrosion Rate	9:30 AM	10:15 AM
	Coffee Break	10:15 AM	10:30 AM
17	Rapid Chloride Ion Penetration and Conductivity	10:30 AM	11:00 AM
	Demonstrations (GalvaPulse, PROOVE'it, Merlin)	11:00 AM	11:40 AM
18	Autogenous Shrinkage and Cracking Potential	11:40 AM	12:25 PM
	Lunch	12:25 PM	1:25 PM
19	Thermal Control	1:25 PM	1:55 PM
20	Air-void Analyzer	1:55 PM	2:30 PM
21	Concrete Rheology Measurement	2:30 PM	3:15 PM
	Demonstration (AVA, ICAR Rheometer)	3:15 PM	3:45 PM
	Review session	3:45 PM	3:55 PM
22	Summary - Presentation of Certificates	3:55 PM	4:15 PM
	Feed back session	4:15 PM	4:25 PM