



Week One

Module 1: Introductions and Orientation

Module 2: History and Theory of Conservation

	Sun 7 April	Mon 8 April	Tues 9 April	Wed 10 April	Thurs 11 April	Fri 12 April	Sat 13 April
9.30				Course opens General Introductions organizers & participants	Introduction to the Architectural History of Rome JJ	History and theory of conservation JJ	
11.00				Visits to premises & facilities (library, lab)			
Break					Collections Coffee Break		
11.30				Cont.	Introduction to the Architectural History of Rome JJ	History and theory of conservation, including international context JJ	
13.00							
Lunch				Welcome Lunch			
14.30				Introduction to the course BM, SiW Expectations exercise JK, JMT	Walking tour, Foro Romano JJ	Values in Conservation JK	
16.00							
Break							
16.30				Expectations exercise Cont.	Cont.		
18.00					Opening Dinner (evening, 19.00)		

Jukka Jokilehto – JJ

Joe King – JK

Benjamin Marcus – BM

Jeanne Marie Teutonico – JMT

Simon Warrack – SiW

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
-----------------------------	---------	-----------------------------	-----------------------------	------------	------------	------------	----------



Week Two

Module 2: History and Theory of Conservation

Module 3: Stone: material characteristics and as a building material

	Sun 14 April	Mon 15 April	Tues 16 April	Wed 17 April	Thurs 18 April	Fri 19 April	Sat 20 April
9.30		Roman construction techniques GR	Types of intervention: Marrying theory with practice GR	Introduction to porous building materials and stone conservation (1) GC	Participant presentations (3)	Participant Presentations (5)	
11.00							
Break							
11.30		Stones in Roman construction AM	Participant Presentations (1)	Introduction to porous building materials and stone conservation GC (2).	Introduction to porous building materials and stone conservation (3) GC	Introduction to the Non-Catholic Cemetery - history and conservation AT	
13.00							
Lunch							
14.30		Architectural history of Rome walking tour SiW, AM	Participant Presentations (2)	Labs GC	Introduction to porous building materials and stone conservation (4) GC	Site Visit to the Non-Catholic Cemetery, introduction to tombs NSP	
16.00							
Break							
16.30		Cont.	Library	Labs GC	Participant presentations (4)	Cont.	
18.00					Pizza party (19:30)		

Gionata Rizzi – GR Adriana Maras – AM Simon Warrack – SiW Giacomo Chiari – GC Amanda Thursfield – AT Nicholas Stanley-Price – NSP

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Three

Module 3: Stone: material characteristics and as a building material

	Sun 21 April	Mon 22 April	Tues 23 April	Wed 24 April	Thurs 25 April (Holiday)	Fri 26 April	Sat 27 April
9.30		Module 2 Review & Discussion (15 minutes)	Stone weathering and decay GL	Working techniques of stone (sculpture) PR	Library Day	Tivoli quarry visit	
11.00		Geology and mineralogy of building stone GL					
Break							
11.30		Cont.	Cont.	Cont.	Cont.	Cont.	
13.00							
Lunch							
14.30		Lab: Basic microscopy, petrography & stone identification GL	Visit to Non-catholic cemetery for stone identification	Walking tour (stone types, tool marks & working techniques) PR, SiW, GL	Library Day	Hadrian's Villa	
16.00			Stone matching and selection GL				
Break							
16.30		Lab: Basic microscopy & petrography & stone identification GL	Cont.	Cont.	Cont.		
18.00							

Graham Lott – GL

Peter Rockwell – PR

Simon Warrack – SiW

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Four

Module 3: Stone: material characteristics and as a building material

	Sun 28 April	Mon 29 April	Tues 30 April	Wed 1 May	Thurs 2 May	Fri 3 May	Sat 4 May
9.30		Documentation & Recording Lecture – Guiding principals RE, AAV	Documentation & Recording – Field exercise at Non-Catholic Cemetery RE, AAV	Rockwell studio visit PR (A)	Introduction to mortars: history and chemistry JF	Masonry systems – stonework & mortar JF	
11.00							
Break							
11.30		Documentation & Recording Lecture - Tools & Techniques RE, AAV	Cont.	Cont.	Mortars and uses (components, ratios, tools for mixing & applying) DO	Mechanical properties of stone in masonry CR	
13.00							
Lunch							
14.30		Documentation & Recording - Photography Demonstration RE, AAV	Documentation & Recording - Processing data collected RE, AAV	Rockwell studio visit PR (B)	Lab: Mixing mortars (lime(s) & cement) DO/JF	Mortar pointing & filling DO (A)	
16.00							
Break							
16.30		Cont.	Cont.	Cont.	Cont.	Mortar pointing & filling (B)	
18.00							

Rand Eppich – RE Ana Almagro Vidal – AAV John Fidler – JF Cristiano Russo – CR David Odgers – DO Peter Rockwell – PR

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Five

Module 3: Stone: material characteristics and as a building material

Module 4: Deterioration mechanisms; Methods of survey & analysis

	Sun 5 May	Mon 6 May	Tues 7 May	Wed 8 May	Thurs 9 May	Fri 10 May	Sat 11 May
9.30		Mortar analysis methods DO	Mortar fabrication and application DO	Review & discussion of Module 3 (15 min)	Non-destructive techniques of investigation JF	Structural behavior of masonry constructions & damage, collapse and reinforcement criteria GCr	
11.00				Overview of deterioration mechanisms JF			
Break							
11.30		Lab: Mortar analysis part I DO & Lab assistant	Mortar fabrication and application DO	Cont.	Non-destructive techniques of investigation demonstration JF	Cont.	
13.00							
Lunch							
14.30		Lab: Mortar analysis part 2 DO & Lab assistant	Mortar fabrication and application DO	Morphology of stone decay including terminology & mapping techniques MLT	Structural issues site visit (Palatino) CR	Pisa GCr	
16.00							
Break							
16.30		Lab: Mortar analysis part 3 DO & Lab assistant	Mortar fabrication and application DO	Cont.	Cont.	Restoration of the Tower of Pisa SV	
18.00				18.00 – 20.30 Special lecture on Persepolis at ICCROM			

David Odgers – DO John Fidler – JF Giorgio Croci – GCr Cristiano Russo – CR Marisa Laurenzi Tabasso – MLT Sabina Vedovello – SV

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Six

Module 4: Deterioration mechanisms; Methods of survey & analysis

	Sun 12 May	Mon 13 May	Tues 14 May	Wed 15 May	Thurs 16 May	Fri 17 May	Sat 18 May
9.30		Introduction to site & mapping exercise <i>SiW, BM & MLT</i>	Overview of micro-destructive diagnostic criteria & techniques <i>MLT</i>	Moisture sources and effects <i>IM</i>	Moisture & its control <i>IM</i>	Salts – sources, formation & effects <i>AH</i>	
11.00							
Break							
11.30		Worksite visit & mapping exercise	Sampling methodology & techniques <i>MLT</i>	Cont.	Methods of control <i>IM</i>	Cont.	
13.00							
Lunch							
14.30		Cont.	Environmental Factors <i>PB</i>	Diagnosis of moisture sources <i>IM</i>	Damp building & demonstration of methods of detection <i>IM</i>	Lab: Salt analysis <i>AH</i>	
16.00							
Break							
16.30		Classroom discussion of mapping exercise	Environmental Factors <i>PB</i>	Cont.	Cont.	Lab: Salt analysis <i>AH</i>	
18.00							

Benjamin Marcus – *BM* Simon Warrack– *SiW* Peter Brimblecombe – *PB* Marisa Laurenzi Tabasso – *MLT* Ippolito Massari – *IM* Alison Heritage – *AH*

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Seven

Study Tour

	Sun 19 May	Mon 20 May	Tues 21 May	Wed 22 May	Thurs 23 May	Fri 24 May	Sat 25 May
	Departure for Florence	Museum of the Opificio delle Pietre Dure PR, SiW	Departure for Carrara	Hands on Conservation techniques – Mortar Filling and Integration Exercise GR, DO & SV	Hands on Conservation techniques – Evaluation of results GR, DO & SV	Departure for Venice	SS Giovanni e Paolo – conservation of Internal Monuments PP
	Florence Free time	Museum of the Opera del Duomo PR, SiW	Quarry visit	Cont.	Cont.		Church of the Miracoli PP
		Departure for Pisa					
	Florence Free time	Visit to apse of Duomo AS	Departure for Parma	Joining and Fixing Exercise	Mechanical pinning exercise	Doges Palace PP	
	Florence Free time		Parma – Cathedral & Baptistery (2 groups) GR & SV Dinner in Parma	Cleaning techniques demonstration	Strapping with carbon fiber	San Marco PP, SiW	Departure for Rome

Stefano Volta – SV Anton Sutter – AS David Odgers – DO Gionata Rizzi – GR Paolo Pagnin – PP Peter Rockwell – PR Simon Warrack – SiW

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Eight

Module 4: Deterioration mechanisms; Methods of survey & analysis

Module 5: Conservation interventions and treatments; criteria for selection and implementation

	Sun 26 May	Mon 27 May	Tues 28 May	Wed 29May	Thurs 30May	Fri 31May	Sat 1 June
9.30		Ecology and mechanisms of bio-deterioration; relation to particular types of environments GC	Lab: Biodeterioration Characterization of samples GC & OS	Methodological approach to conservation interventions SG	Practical repair options DO	Archaeological repairs GR	
11.00							
Break							
11.30		Microbiological deterioration OS	Lab: Bio-deterioration Characterization of samples GC & OS	Structural repairs JS	Cont.	Wells Cathedral DO	
13.00							
Lunch							
14.30		Non Catholic Cemetery – in situ examination, sampling & treatment tests OS	Vegetation control OS/GC	Cont.	Architectural repairs SG	Non Catholic Cemetery – structural review with engineers JS/SG	
16.00							
Break							
16.30		Cont.	Biodeterioration and treatment discussion GC & OS	Emergency & preventive interventions DO	Cont.	Cont.	
18.00			Module 4 Review & discussion (15 mins)				

Ornella Salvadori – OS

Giulia Caneva – GC

Gionata Rizzi – GR

David Odgers – DO

Jeff Stott – JS

Stephen Gee – SG

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Nine

Module 5: Conservation interventions and treatments; criteria for selection and implementation

	Sun 2 June	Mon 3 June	Tues 4 June	Wed 5 June	Thurs 6 June	Fri 7 June	Sat 8 June
9.30		Visit to the Vatican Museum: Lab GD	Introduction to cleaning DO	Graffiti cleaning Coatings as protection – maintenance, removal & reapplication JaF	Desalination methods Control & mitigation Poulticing for salts VVB	Lab: Removal & evaluation VVB	
11.00							
Break							
11.30		Visit to the Vatican Museum: Colonnade GD	Cleaning systems DO/JaF	Exercise on Graffiti and cleaning JaF	Cont.	Cont.	
13.00							
Lunch							
14.30		Cont.	Cleaning sandstone Cleaning limestone DO/JaF	Lab: Mortar samples & wall pointing analysis (cracking, strength, carbonation, porosity) DO	Lab: Poulticing, titrations, conductivity measurements VVB	Laser Cleaning demo	
16.00							
Break							
16.30		Structural repair of sculpture, including doweling, packing, and moving GD	Cleaning: Possible negative impacts (disasters) DO/JaF	Cont.	Cont.	Cont.	
18.00	Consolidation - lime based & nanolime technology DO						

Guy Devreux – GD

David Odgers – DO

Jamie Fairchild – JaF

Veronique Vergès Belmin – VVB

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Ten

Module 5: Conservation interventions and treatments; criteria for selection and implementation

	Sun 9 June	Mon 10 June	Tues 11 June	Wed 12 June	Thurs 13 June	Fri 14 June	Sat 15 June
9.30		Introduction to consolidation GW	Consolidants - Alkoxysilane based Part 2 GW	Lab: Consolidation application methods GH / GW	Angkor Wat – removal of consolidants for retreatment of deteriorated stone SiW	Control & prevention of biological growth / Methods for evaluating biocides, bioremediation OS	
11.00					Evaluating performance of consolidants: field methods GW		
Break							
11.30		Cont.	St. Trophime marble consolidation GW	Cont.	Water repellants GH	Revisit the cemetery to see the work done with biocides OS	
13.00							
Lunch							
14.30		Consolidation - Solvent based GW	Evaluating performance of consolidants: lab methods and protocols GW	Cont.	General questions and discussion on consolidation of stone and treatment w/ water repellants GW, GH, SiW	Lady Temple Memorial TR	
16.00							
Break							
16.30		Consolidants - Alkoxysilane based. Part 1 GW	Consolidation application methods and object conditions GH	Durability and retreatment of silicic acid ester treatments GH	The conservation of paint on stone GH	Mosaic conservation TR	
18.00							

George Wheeler – GW Gottfried Hauff – GH Simon Warrack – SiW Ornella Salvadori – OS Tom Roby – TR

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------



Week Eleven

Module 5: Conservation interventions and treatments; criteria for selection and implementation

Module 6: Synthesis

	Sun 16 June	Mon 17 June	Tues 18 June	Wed 19 June	Thurs 20 June	Fri 21 June	Sat 22 June
9.30		Granite JDR	Explanation of final exercise Fieldwork	Field work at cemetery	Field work at cemetery	Field work at cemetery	
11.00							
Break							
11.30		Granite JDR	Field work at cemetery	Cont.	Cont.	Cont.	
13.00							
Lunch							
14.30		Angkor Wat living heritage SiW	Cont.	Cont.	Cont.	Cont.	
16.00							
Break							
16.30		Coral stone BM	Cont.	Cont.	Cont.	Cont.	
18.00		Module 5 Review & discussion (15 mins)					

José Delgado Rodrigues – JDR

Simon Warrack – SiW

Benjamin Marcus – BM

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
-----------------------------	---------	-----------------------------	-----------------------------	------------	------------	------------	----------



Week Twelve

Module 6: Synthesis

	Sun 23 June	Mon 24 June	Tues 25 June	Wed 26 June	Thurs 27 June	Fri 28 June	Sat 29 June
9.30		Field work at cemetery	Field work at cemetery	Final presentations - cemetery	Expectations exercise JMT/SM	Free morning	
11.00							
Breck							
11.30		Cont.	Cont.	Final presentations - cemetery	Expectations exercise JMT/SM	Closing ceremony	
13.00							
Lunch							
14.30		Cont.	Cont.	Evaluation of treatment and preparation of future evaluations for the site work JMT/SM	Free Afternoon	END OF COURSE	
16.00							
Breck							
16.30		Cont.	Cont.	Cont.	Free Afternoon		
18.00					Closing dinner (evening)		

Jeanne Marie Teutonico – JMT

Susan Macdonald – SM

SC13 curriculum

Last update: Getty-ICCROM, 25 June 2013

Course opening & closing	Lecture	Exercise / Demonstration	Participant presentation	Case study	Laboratory	Site visit	Worksite
--------------------------	---------	--------------------------	--------------------------	------------	------------	------------	----------