Study plan Bachelor

Bachelor of Arts HES-SO in Conservation, 180 ECTS, 2023-2026

All courses are evaluated on a regular basis (written or oral examinations, written documentations, exercises and laboratories, presence). conservation-restauration@he-arc.ch, +41 (0)32 930 19 19

							24	36	24	36	33	30
Module	SWH ¹ Coef unit	Module / Unit titel	Courses description	Teacher	Course hours ²	Coef notes	S1	S2	53	S 4	S5	S6
AC1	180	Conservation 1			88		6					
AC1.1	0.4	Managing collections and their environment 1	Physics of buildings Environmental basics: Relative Humidity, Temperature. Measurements and tools	ALT	12				-			
			Principles of preventive conservation. Interaction of objects with their environment.	NDU	16							
			Processus, documentation and terminology in CR	RBE	4							
AC1.2	0.4	Visual documentation 1	Computer tools	TJA	8							
			Photography - studio and on site, and computer graphics 1	VAB	20							
				AIVIL	12							
AC1.3	0.2	Introduction to materials used for artifacts 1	Ceramic, glass 1 - material, technology and degradation processes	CMA	16	x						
AH1	180	Humanities 1	- + · · · · · · · · · · · · · · · · · ·		85		6					
AH1.1	0.4	Objects and Societies 1	Antiquity	HDE	14							
			From the "big bang" to our days, geographical survey, Paleolitic, neolitic, protohistory	AGM	19							
AH1.2	0.3	Written documentation and methodology 1	Method of documentation, assessment of the conditions of conservation, establishment of a repository and choice of indicator	NDU	28							
AH1.3	0.3	Objects, heritage and museums 1	Ethnographic object and Society	AGM	12							
			Technological objects and history 1	JBO	12							
AN1	180	Natural sciences 1			86		6					
AN1.1	0.4	Basics in Chemistry 1	Composition and binding in materials ; Stoichiometry Thermodynamic and kinetic of chemical reactions ; Chemical equilibrium	ADO	36							
AN1.2	0.3	Basics in Physics 1	Applied physics to conservation 1	LBR	24							
AN1.3	0.1	Introduction to properties of materials 1	Inorganic material	ADO	12							
AN1.4	0.2	Health and safety 1	Occupational health and safety prevention: legal bases and statistics, chemical, physical, biological, mechanical and fall hazards, ergonomics, personal protective equipment, prevention methods.	Gerber	8							
			Introduction to Basic Life Support and First aid (two separate groups, each for 6 hours)	Gelin	6							
AN1.5	sans éval.		Basics in Maths : support course open to every CR students (organized if questions are asked)	LBR	4							
AW1	180	Conservation workshop 1	- ·		166		6					
AW1.1	0.3	Collections conservation survey and monitoring 1	Monitoring and monitoring tools, data capture with Excel.	TJA	44							
AW1.2	0.5	Ceramic	Project management : examination, diagnostic, propositions, documentation Cleaning Adhesives and coating Labelling Visits : handworkers, workshops, museum collections, laboratories	CMA	64							
AW1.3	pass/fail	Moulds and copies		Hug	36	1	1					
AW1.4	0.2	Basic tools and documentation in CR	Basic tools in CR (two separate groups, each for 8 hours)	ARC	8							
			Computer tools for collections management system and CR-documentation 1	VAB	14							



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AC2	180	Conservation 2			71	6		
AC2.1	0.1	Managing collections and their environment 2	Processus, documentation and terminology in	ACU	4			
			CR					
			Environmentatl basics: light and pollutants.	TJA	3			
			Measurements and tools			_		
AC2.2	0.3	Visual documentation 2	Drawing : vector drawing and image processing 1	RJE	20			
AC2.3	0.6	Introduction to materials used for artifacts 2	Vegetal, animal and composite materials -	Goron	20			
			materials, technology and degradation processes					
			Paleoecology. Introduction to geology.	AME	12	-		
			Polymers and resines 1 - material and	ADO	8			
			degradation processes	Chantriaux	4	-		
			Mosaics 1 - material and degradation processes	Chanthaux	4			
AH2	180	Humanities 2		-	67	6		
AH2.1	0.2	Objects and Societies 2	Early Middle Ages, Late Middle Ages	Laurenti (HDE)	15			
AH2.2	0.4	History, ethics and theory of conservation	Method of documentation, assessment of the	NDU	28			
			conditions of conservation, establishment of a					
			repository and choice of indicator					
AH2.3	0.4	Objects, heritage and museums 2	Ethnographic object and Society	AGM	12			
			Technological objects and history 2	JBO	12			
AN2	180	Natural sciences 2			72	6		
AN2.1	0.5	Basics in Chemistry 2	Acids and bases; redox reactions, oxydation and	ADO	36			I
			reduction, electrochemistry.					
AN2.2	0.3	Basics in Physics 2	Applied physics to conservation 2	LBR	24	-		
AN2.3	0.2	Introduction to properties of materials 2	Organic materials	ADO	12			
AW3	180	Conservation workshop 3	- ·	•	164	6		
AW3.1	0.6	Collections conservation survey and monitoring 2	Climate studies. Collections conservation	TJA	96		•	
			assessment. Long term storage materials.					
			Handling and transportation.					
			Object labelling or marking, Inventory number	Kissel	4	-		
				Ribbel				
AW3.2	0.3	Packing 1 : Conservation storage materials and	Packing system, material working (synthetic	Boulangé	48			
AW3.3	0.1	Materials identification tests	Oddy test and material identification tests.	ADO	16			
AW2	180	Conservation workshop 2 - external	1		1	6		
AW2		Preventive conservation for heritage collections 1.	Collections conservation assessment. Handling,	TJA	4.5 weeks			
		Traineeship.	transportation, storage, packing					
AW4	180	Conservation workshop 4 - external	1	I	I	6		
AW4		Preventive conservation for heritage collections 2.	Collections conservation assessment. Handling,	TJA	4.5 weeks			
		Traineeship.	transportation, storage, packing					
1					1	1		

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BC1	180	Conservation 3			86			6	
BC1.1	0.6	Managing the collection and its environment 1	Compatibility of storage and exhibition materials	ADO	12				
	5.0								
			Origin and sensitiveness (interactions)	NDU	8		1		
				VAD	10				
			graphics 2	VAB	10				
			Cultural values, authenticity and conservation	RBE	12				
			principles						
BC1.2	0.2	Technology of artifacts 1	Identification of traces of manufacturing and use	TSC	4				
			Metal and alloys 1 - materials and technology	VBO	8				
			Metal and alloys 2 - structure and degradation processes	VBO	8				
BC1.3	0.2	Introduction to degradation processes 1	Architecture, stone, mortar, wall paintings 2 -	Guyot	12	1			
			Materials, technology and degradation						
			processes						
			Polymers (artificial and synthetic materials) -	Rouzet	6				
			Materials and degradation processes						
BH1	180	Humanities 3			56			6	
BH1.1	0.3	Objects and Societies 3	Renaissance, 17th	Laurenti	18				
				(HDE)					
BH1.2	0.3	Written documentation and methodology 2	Terms and language of conservation (8h).	GRA	14				
			Aims, documentation forms, permanence of information (6b)						
DU11-2	0.1	Objects besites and success 2		1014	12		-		
BH1.3	0.4	Objects, heritage and museums 3	Heritage objects : the Ethnologist point of view	AGIVI	12				
			Scientific and technological heritage in History	JBO	12				
BN1	180	Natural sciences 3			68			6	
BN1.1	0.4	Chemistry for conservation 1	Organic chemistry; Organic Nomenclature	ADO	24				
			Laboratory techniques: weighting and laboratory	ADO	4				
BN1.2	0.4	Basics in Biology 1	The living : plant and animal cells, protozootes,	AME	24				
BN1.3	0.2	Introduction to instrumental analysis	Photo, UV, NIR, X-Ray, Radiography, IR-	CDE	12				
BN1.4	pass/fail	Health and safety 2	Introduction to Basic Life Support and First aid (Reminder)	Domaine SAN	4				
BW1	180	Conservation workshop 5			190			6	
BW1.1	0.3	Composites : dismantling 1	Dismantling and reassembling methods	TSC	64				
BW1.2	0.5	Basics in wood and metal working	Basics in woodworking	Grall Burst	40				
			Material working, wood working, metal working,	GRA	56	1	1		
			mounting, boxes, packing, working with						
-	<i>.</i>		synthetic polymers						
BW1.3	0.1	Documentation	Collections management systems and documentation in CR (advanced)	VAB	14				
BW1.4	0.1	Polymers: artificial and synthetic materials -		Rouzet	16				
		identification and condition assessment							

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BC2	180	Conservation 4			67			6	
BC2 1	0.2	Visual documentation 3	Photography - studio and on site, and computer	VAB	12			0	
	0.2		graphics 3	•//0		-			
BC2.2	0.6	Technology of artifacts 2	Sculpture and painting - Materials, technology and degradation processes	ANG	20				
			Paper, Photography - materials, technology and degradation processes	Dobrusskin	8				
			Textiles 1 - materials and degradation processes	Vogt	8				
			Textiles 2 - technology	Schorta	4				
			Pigments and dyes	EJO	3				
BC2.3	0.2	Introduction to degradation processes 2	Collection assesment : Storage plans and management, calcul of space and volume	ALT	12				
BH2	180	Humanities 4	•		76			6	
BH2.1	0.4	Objects and Societies 4	18th Century, 19th Century and 20th Century	HDE	18		-		
			20th and 21st Centuries	Bodenmann	10	-			
BH2.2	0.3	Legal aspects, business and work managment in	Business and work management in conservation	Ludwig	16	-			
		conservation	; Organisation and legal forms of a company; Taxes, financing, administration, contracts,						
			Legal aspects	Fischer	8	-			
BH2.3	0.3	Objects, heritage and museums 4	Ethnographic objects in museums	AGM	12	-			
			Scientific and technological Heritage in Museography	JBO	12				
BN2	180	Natural sciences 4			80			6	
BN2.1	0.6	Chemistry for conservation 2	Atomic and molecular orbitals; Hybridization;	ADO	36				
			Linseed oil polymerisation workshop & FTIR analysis	LBR	8				
BN2.2	0.3	Basics in Biology 2	Interpretation of cultures, preparation and	AME	12				
			Identification of micro-organisms	EJO	12				
BN2.3	0.1	Basic concepts of scientific analysis	An elementary approach to analytical techniques	CDE	12				
BW3	180	Conservation workshop 7	•••••••••••••••••••••••••••••••••••••••		210			6	
BW3.1	0.4	Metal and wood working applied to objects mounting.	Introduction to wood-turning. Coloring and painting. Conception of objects mounting and application.	TSC	82				
BW3.2	0.3	Packing 2 : Conservation systems for transport	Packing for storage and transport. Introduction to shock tests.	Boulangé	60				
BW3.3	0.2	Collections conservation survey and monitoring 3	Collection assesment. Storage plans and management. Showcases conception project	ALT	36				
BW3.4	0.1	Colour and retouching	Colour and retouching	ANG	32	1			
BW2	180	Conservation workshop 6 - external	•					6	
BW2		Preventive conservation for heritage collections 3.	Climate control, storage and display conditions,	VBO	4.5 weeks				
		Traineeship.	packing and transportation. Survey, assessment and management. Evaluation of storage and display conditions.						
BW4	180	Conservation workshop 8 - external	•					6	
BW4		Preventive conservation for heritage collections 4. Traineeship.	Climate control, storage and display conditions, packing and transportation. Survey, assessment and management. Evaluation of storage and display conditions.	VBO/TJA	4.5 weeks				

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CC1	270	Conservation 5			104				9	
CC1.1	0.2	Advanced studies in technology, degradation and	Archaeological and historic metals	VBO	14					
		conservation of cultural heritage objects - metal and								
		alloys	Modern metal alloys	TSC	8		-			
					_					
CC1.2	0.2	Advanced studies in technology, degradation and	Ceramic, glass	CMA	16		-			
		conservation of cultural heritage objects - ceramic and glass								
CC1.3	0.1	Advanced studies in technology, degradation and conservation of cultural heritage objects - organic materials	Organic materials	Goron	14					
CC1.4	0.1	Advanced course in physics	Applied physics to conservation 3	LBR	12					
CC1.5	0.4	Managing collections and their environment 4	Risk analysis	TJA	8					
				von Lerber	16					
				Sauvagnargue s	16					
CH1-AE	90	Humanities 5-AE ³			28				3	
CH1.1-AE	0.4	Objects, heritage and museums 5	Ethnology and its methods	AGM	12					
CH1.2-AE	0.6	Archaeology	Archaeological artefacts	AGM	16					
CH1-STH	90	Humanities 5-STH ³	·		44				3	
CH1.1- STH	0.3	Objects, heritage and museums 5	Scientific and technological objects in museums 2	JBO	12					
CH1.2- STH	0.7	Scientific revolution and experimental science	History of sciences and techniques	JBO	32					
CW1	180	Conservation workshop 9	·		78				6	
CW1.1	0.8	Glasses	Glasses	CMA	64					
CW1.2	0.2	Security and safety, risk assessment	Security and safety : management, control, equipment	TJA	14					
CW2	180	Conservation workshop 10			128				6	
CW2		Metal and alloys	Metal and alloys	VBO	92					
			Heat treatments of steel. Introduction to mechanical cleaning.	TSC	36					
CW4	180	Conservation workshop 12			120				6	
CW4		Approach of technical objects	Project management on technical objects conservation. Team working. Dismantling and cleaning treatments.	TSC/Binet	120					
CW3	180	Conservation workshop 11								6
CW3		Basics in cleaning of organic materials	Basics in cleaning of organic materials	CAL	112					
CW5	180	Conservation workshop 13	L	1	1					6
CW5		Disaster response		NDU, Kissel,	128					
				von Lerber, Desplanches, etc.						
CW6	180	Bachelor thesis preparation	1	I	1					6
CW6		Bachelor thesis preparation		RBE, TJA, TSC,	128					
CC2	360	Bachelor thesis	1		1					12
CC2		Bachelor thesis		RBE, TJA, TSC,	9 weeks			-		
				VBO	1	1	1			

¹SWH = Student Working Hours

 2 Une heure de cours = 60 minutes

³Option à choix selon orientation