Study plan Bachelor



Bachelor of Arts HES-SO in Conservation, 180 ECTS, 2024-2027

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

						EC15 pro ser			Jenne	iestei						
								18	80							
						24	36	24	36	33	30					
	SWH ¹				Course											
Module	Coef unit	Module / Unit titel	Courses description	Teacher	hours ²	S1	S2	S3	S4	S5	S6					
AC1	180	Conservation 1			90	6										
AC1.1	0.4	Managing collections and their environment 1	Physics of buildings	TJA I	12											
			Environmental basics: Relative Humidity,													
			Temperature.													
			Measurements and tools	NDU	16	1										
			Principles of preventive conservation. Interaction of objects with their environment.	NDU	16											
			Processus, documentation and terminology in	RBE	4	1										
			CR			1										
				ACU	2											
AC1.2	0.4	Visual documentation 1	Computer tools	TJA	8	┪										
			Photography - studio and on site, and computer	VAB	20	┨										
			graphics 1	VAB	20											
			Introduction to microscopy for conservators	AME	12	1										
						1										
AC1.3	0.2	Introduction to materials used for artifacts 1	Ceramic, glass 1 - material, technology and	CMA	16											
AUG	400	Uaikia d	degradation processes		0=	-										
AH1 1	180	Humanities 1	Antiquity	LIDE	85	6										
AH1.1	0.4	Objects and Societies 1	Antiquity	HDE	14	1										
			From the "big bang" to our days, geographical	AGM	19											
			survey, Paleolitic, neolitic, protohistory													
AH1.2	0.3	Written documentation and methodology 1	Method of documentation, assessment of the	NDU	28	†										
		G,	conditions of conservation, establishment of a													
			repository and choice of indicator													
A114.2	0.2	Objects to the Property of the	Ethania de la carta de la carta	1614	42	-										
AH1.3	0.3	Objects, heritage and museums 1	Ethnographic object and Society	AGM	12	1										
			Technological objects and history 1	JBO	12											
AN1	180	Natural sciences 1			89	6										
AN1.1	0.4	Basics in Chemistry 1	Composition and binding in materials ;	ADO	36											
			Stoichiometry													
			Thermodynamic and kinetic of chemical reactions; Chemical equilibrium													
AN1.2	0.3	Basics in Physics 1	Applied physics to conservation 1	LBR	24	1										
AN1.3	0.1	Introduction to properties of materials 1	Inorganic material	ADO	12	┨										
			3			┨										
AN1.4	0.2	Health and safety 1	Occupational health and safety prevention: legal bases and statistics, chemical, physical,	Gerber	8											
			biological, mechanical and fall hazards,													
			ergonomics, personal protective equipment,													
			prevention methods.													
						-										
			Introduction to Basic Life Support and First aid (two separate groups, each for 6 hours)	Domaine SAN	9											
			(two separate groups, each for o flours)													
AN1.5	sans éval.		Basics in Maths : support course open to every	LBR	4	1										
			CR students (organized if questions are asked)													
AW1	180	Conservation workshop 1			166	6										
AW1.1	0.3	Collections conservation survey and monitoring 1	Monitoring and monitoring tools, data capture	TJA	44											
AW1.2	0.5	Ceramic	with Excel. Project management : examination, diagnostic,	CMA	64	┨										
^*****	0.5	oc. aie	propositions, documentation	CIVIA	0 4											
			Cleaning Adhesives and coating Labelling													
İ			Visits : handworkers, workshops, museum													
			collections, laboratories													
AW1.3	pass/fail	Moulds and copies		Hug	36	1										
AW1.3	pass/fail	Moulds and copies	Racin tools in CP (two convets groups, each for	Hug	36	-										
AW1.3 AW1.4	pass/fail	Moulds and copies Basic tools and documentation in CR	Basic tools in CR (two separate groups, each for 8 hours)	Hug ARC	36 8	- - -										
		· · · · · · · · · · · · · · · · · · ·	Basic tools in CR (two separate groups, each for 8 hours) Computer tools for collections management			-										
		· · · · · · · · · · · · · · · · · · ·	8 hours)	ARC	8	-										

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								1	80		
						24	36	24	36	33	30
	SWH ¹				Course	S1	S2	53	S4	S5	S6
Module	Coef unit	Module / Unit titel	Courses description	Teacher	hours ²	31	32	33	34	33	30
AC2	180	Conservation 2			67		6				
AC2.1	0.1	Managing collections and their environment 2	Environmentatl basics: light and pollutants. Measurements and tools	TJA	3						
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 - materials, technology and degradation processes	Goron	20						
			Paleoecology. Introduction to geology.	AME	12	İ					
			Polymers and resines 1 - material and degradation processes	ADO	8						
			Mosaics 1 - material and degradation processes	Chantriaux	4	1					
AH2	180	Humanities 2			67		6				
AH2.1	0.2	Objects and Societies 2	Early Middle Ages, Late Middle Ages	Laurenti	15						
AH2.2	0.4	History, ethics and theory of conservation	Method of documentation, assessment of the conditions of conservation, establishment of a repository and choice of indicator	NDU	28						
AH2.3	0.4	Objects, heritage and museums 2	Ethnographic object and Society	AGM	12	i					
			Technological objects and history 2	JBO	12	İ					
AN2	180	Natural sciences 2			72		6				
AN2.1	0.5	Basics in Chemistry 2	Acids and bases; redox reactions, oxydation and reduction, electrochemistry.	ADO	36						
AN2.2	0.3	Basics in Physics 2	Applied physics to conservation 2	LBR	24	İ					
AN2.3	0.2	Introduction to properties of materials 2	Organic materials	ADO	12	İ					
AW3	180	Conservation workshop 3			164		6				
AW3.1	0.6	Collections conservation survey and monitoring 2	Climate studies. Collections conservation assessment. Long term storage materials. Handling and transportation.	TJA	96				•		
			Object labelling or marking. Inventory number	Leuenberger	4						
AW3.2	0.3	Packing 1 : Conservation storage materials and	Packing system, material working (synthetic	Boulangé	48	İ					
AW3.3	0.1	Materials identification tests	Oddy test and material identification tests.	ADO	16						
AW2	180	Conservation workshop 2 - external			1		6				
AW2		Preventive conservation for heritage collections 1. Traineeship.	Collections conservation assessment. Handling, transportation, storage, packing	TJA	4.5 weeks						
AW4	180	Conservation workshop 4 - external					6				
AW4		Preventive conservation for heritage collections 2. Traineeship.	Collections conservation assessment. Handling, transportation, storage, packing	TJA	4.5 weeks						

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						180					
						24	36	24	36	33	30
	SWH ¹				Course						
Module	Coef unit	Module / Unit titel	Courses description	Teacher	hours ²	S1	S2	S3	S4	S5	S6
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						
			Origin and sensitiveness (interactions)	NDU	8	-					
			, ,	VAB	16	4					
			Photography - studio and on site, and computer graphics 2								
			Cultural values, authenticity and conservation principles	RBE	12						
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	1					
BC1.3	0.2	Introduction to degradation processes 1	Architecture, stone, mortar, wall paintings 2 - Materials, technology and degradation processes	Guyot	12						
			Polymers (artificial and synthetic materials) - Materials and degradation processes	Rouzet	6						
BH1	180	Humanities 3			56			6			
BH1.1	0.3	Objects and Societies 3	Renaissance, 17th	Laurenti	18						
BH1.2	0.3	Written documentation and methodology 2	Terms and language of conservation (8h). Aims, documentation forms, permanence of information (6h).	GRA	14						
BH1.3	0.4	Objects, heritage and museums 3	Heritage objects : the Ethnologist point of view	AGM	12	1					
			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, mounting, boxes, packing, working with synthetic polymers	GRA	56						
		Documentation	Collections management systems and	VAB	14	1					
BW1.3	0.1	Documentation	documentation in CR (advanced)								

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						ECIS pro Semester					
								18	30		
						24	36	24	36	33	30
	SWH ¹				Course						
Module	Coef unit	Module / Unit titel	Courses description	Teacher	hours ²	S1	S2	S3	S4	S5	S6
BC2	180	Conservation 4			67				6		
BC2.1	0.2	Visual documentation 3	Photography - studio and on site, and computer graphics 3	VAB	12						
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	1					
			Pigments and dyes	EJO	3	1					
BC2.3	0.2	Introduction to degradation processes 2	Collection assesment : Storage plans and management, calcul of space and volume	TJA	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	1					
BH2.2	0.3	Legal aspects, business and work managment in conservation	Business and work management in conservation; Organisation and legal forms of a company; Taxes, financing, administration, contracts,	Ludwig	16						
			accounting Legal aspects	Fischer	8	1					
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	1					
			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	TJA	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. Traineeship.	Climate control, storage and display conditions, packing and transportation. Survey, assessment and management. Evaluation of storage and display conditions.	VBO	4.5 weeks						
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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							ECT	S pro	Seme	ester	
								1	80		
						24	36	24	36	33	30
Module	SWH ¹ Coef unit	Module / Unit titel	Courses description	Teacher	Course hours ²	S1	S2	S3	S4	S5	S6
CC1	270	Conservation 5		- caunci	104					9	
CC1.1	0.2	Advanced studies in technology, degradation and conservation of cultural heritage objects - metal and	Archaeological and historic metals	VBO	14						
		alloys	Modern metal alloys	TSC	8						
CC1.2	0.2	Advanced studies in technology, degradation and conservation of cultural heritage objects - ceramic and	Ceramic, glass	CMA	16	<u> </u>					
CC1.3	0.1	glass 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	1					
CC1.5	0.4	Managing collections and their environment 4	Risk analysis	TJA	8						
				von Lerber	16	1					
				Sauvagnargues	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 Heat treatments of steel. Introduction to	VBO TSC	92	1					
C)4/4	400	0	mechanical cleaning.		420						
CW4	180	Conservation workshop 12 Approach of technical objects	Project management on technical objects conservation. Team working. Dismantling and cleaning treatments.	TSC/Binet	120 120					6	
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									6
CW5		Disaster response		NDU, Cauliez, Vaudant, Desplanches, Künzi, etc.	128						
CW6	180	Bachelor thesis preparation									6
CW6		Bachelor thesis preparation		TSC, TJA, RBE, Boulangé, Meier	128						
CC2	360	Bachelor thesis	<u></u>	•							12
CC2		Bachelor thesis		TSC, TJA, RBE, Boulangé, Meier	9 weeks			-			
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¹SWH = Student Working Hours



²Une heure de cours = 60 minutes

³Option à choix selon orientation