HAWK Fakultät Bauen und Erhalten Hildesheim

Module Handbook

Bachelor of Conservation and Restoration

Valid as per winter semester 2020/2021

Hochschule für angewandte Wissenschaft und Kunst Hildesheim/Holzminden/Göttingen
University of Applied Sciences and Arts

www.hawk.de/b

The module handbook includes all compulsory and elective modules of the Bachelor's degree program for Conservation and Restoration (B.Sc.) at HAWK University of Applied Sciences. The tabular module descriptions can be updated as required and as decided by the responsible study commission, taking full account of the accreditation conditions.

The compulsory modules are obligatory for all students in the Bachelor's program for Conservation and Restoration and, in the first two semesters, primarily cover the fundamentals of the program, interdisciplinary teaching content in the natural sciences, materials science, art history (with the theory and history of restoration) and academic research and writing. All students complete the 1st and 2nd semesters together. From the 3rd semester onwards, students choose their own major and enroll in the chosen major (see Table 1 for the course of studies and teaching content). Four majors are offered:

Conservation and restoration of

Polychrome wooden objects and paintings;
Furniture, wooden objects and material combinations;
Archive material, book and graphics;
Stone objects and architectural surfaces

There is the option of taking a second major after completion of the 4th semester in order to expand specialist knowledge and skills in a targeted manner. The study of a second major extends the study time by two semesters, in which the technical contents (3rd and 4th semester) of the second major are studied (see Table 2 and Table 3). The required modules are described in a learning agreement. The additional major has no effect on the overall grade and the 180 credit points of the 6-semester Bachelor's program. The additional major is indicated in the appendix of the certificate.

The 5th semester is a practical semester, called the practical phase, which lasts 18 weeks. Students are given the opportunity to work in external institutions/workshops to further develop their skills and abilities. Planning and implementation of a practical semester abroad is supported by the International Office.

The preparation and execution of the final thesis with colloquium takes place in the 6th semester. In addition, the restorative work and documentation on the student's own objects are completed; courses on special restorative treatments can also be taken.

It is strongly recommended that the major(s), the external institutions and restoration workshops of the practical phase as well as the topic of the final thesis be carefully selected and combined in a way that best suits the student’s interests. To do so, students should seek the advice of the professors in the study program.

The Bachelor of Science degree awarded upon completion of the Bachelor's program is a first professional qualification at Level 1 of the Qualifications Framework for German Higher Education Qualifications. The degree further qualifies the student to take up studies at Level 2, Master's degree programs, e.g. the Master's degree program in Conservation and Restoration Science at HAWK University of Applied Sciences. This degree indicates that the student has acquired comprehensive competence in the field of materials and natural sciences, and the specialty “Microbiology for Restoration” is a unique selling feature for the university.

List of abbreviations:

LVS	Mandatory hours
P	Compulsory
SS	Summer semester
SWS	Semester week hours
WP	Compulsory elective
WS	Winter semester

Table 1: Study plan with contents of the 6-semester Bachelor's degree program in Conservation and Restoration. Studies in a chosen major begin in the 3rd semester. It should be noted that the studies include a high proportion of material science and natural science courses as well as practice-related modules.

Study plan and study contents for a Bachelor's Degree in Conservation and Restoration (B.Sc.) with one major

Modules	Name		BK2 Basic studies 1st semester	BK2 Basic studies 2nd semester	BK3 1st major 3rd semester	BK4 1st major 4th semester	BK5 Advanced studies 5th semester	BK6 Advanced studies 6th semester
BKX-1	**Project work**	**WP**	Artistic techniques, compulsory elective: Book painting, modeling, carving, drawing 180 h, 6 CP	Historical techniques, compulsory elective: Printing techniques, fresco, icon, gilding, sculpture 180 h, 6 CP	Conservation in practical application, major-specific: Object investigation, conservation, cleaning 180 h, 6 CP	Restoration in practical application, major-specific: Cleaning, stabilizing, completing 180 h, 6 CP	External practical training phase, in restoration workshops 900 h, 30 CP	Preparation, topic finding, final thesis. Major-specific 90 h, 3LP
BKX-2	**Preventive conservation**	**P**	Introduction, basic physical principles, proper object protection in storage facilities 180 h, 6 CP	Basic principles of building physics, building materials, climatic conditions, checking and measuring technology 180 h, 6 CP	Basic microbiology, microorganisms, identification, prevention 180 h, 6 CP	Damage prevention for exhibitions and presentation of cultural objects 180 h, 6 CP		
BKX-3	**Material science**	**P**	Inorganic chemistry and materials: colorants, pigment production 90 h, 3 CP	Organic chemistry, introduction, binding agents, tests, cellulose, colorant chemistry 90 h, 3 CP	**Polymer chemistry, continued organic chemistry: adhesives, solvents** 90 h, 3 CP	Material analyses for paper, wood, stone, mortar, paints; radiation examinations with case studies 180 h, 6 CP		
BKX-4	Academic research / Documentation	**P**	Basic principles of literature / source research, bibliographies, citations, theory of photography 90 h, 3 CP	Systematic object and material description, documentation photography 90 h, 3 CP				Final Bachelor thesis 360 h, 6 CP
BKX-5	**Art history, restoration theory**	**P**	Art, - cultural heritage of the Middle Ages / Renaissance; basic concepts of conservation of cultural heritage 180 h, 6 CP	Art, cultural heritage of modern times to mid-20th century, history of restoration / preservation of historical monuments 180 h, 6 CP	European art history; monument values, theory of restoration 90 h, 3 CP			
BKX-6	**Conservation / Restoration techniques**	**P WP**		Introduction to measurement and equipment technology for conservators with exercises 90 h, 3 CP	Major-specific: conservation techniques, VL + work on objects 180 h, 6 CP	Major-specific: restoration techniques, VL + work on objects 360 h, 6 CP		Major-specific: Object work/ special treatments 360 h, 6 CP
BKX-7	**Materials science and technology**	**P WP**	Basic materials: history, structure, properties, production, processing 90 h, 3 CP	Basic materials: history, structure, properties, production, processing 90 h, 3 CP	Major-specific: basic materials: history, structure, properties, production, processing 180 h, 6 CP			
BKX-8	**Individual profile studies (HAWK plus)**	**WP**	Individual offers from HAWK plus, language recommended 90 h, 3 CP					Individual offers from HAWK plus, language recommended 90 h, 3 CP
Hours	**5,400 h., 180 CP**		**900 h, 30 CP**	**900 h, 30 CP**	**900 h, 30 CP**	**900 h, 30 CP**	**900 h, 30 CP**	**900 h, 30 CP**

Basic studies, modules for all students: 2,430 h; 81 CP of 180 CP
Advanced study in a previously chosen area of specialization (major): 2790 h; 93 CP of 180 CP
HAWK plus studies: 180 h; 6 CP of 180 CP

Table 2: Study plan with contents for a 2nd major. It is possible to add a second major after completing the fourth semester within the regularly prescribed period

Study plan for the second major				
Modules	**Name**		**BK3 - 2nd major**	**BK4 - 2nd major**
			Special contents 3rd semester	**Special contents 4th semester**
BKX-1	**Project work**	**WP**	Conservation in practical application, major-specific: Object investigation, protection, cleaning 180 h, 6 CP	Restoration in practical application, major-specific: cleaning, stabilizing, completing 180 h, 6 CP
BKX-1	**Project work**	**WP**	Practical phase externally in restoration workshops or internally with specific offers 360 h, 12 CP	Practical phase externally in restoration workshops or internally with specific offers 360 h, 12 CP
BKX-2	**Preventive conservation**	**P**		
BKX-3	**Material science**	**P**		
BKX-4	**Academic research**	**P**		
BKX-5	**Art history, restoration theory**	**P**		
BKX-6	**Conservation / Restoration techniques**	**WP**	Major-specific: conservation techniques, VL + work on objects 180 h, 6 CP	Major-specific: restoration techniques, VL + work on objects 360 h, 6 CP
BKX-7	**Materials science and technology**	**WP**	Major-specific: materials: history, structure, properties, production, processing, 180 h, 6 CP	
BKX-8	**Individual profile studies**	**WP**		
Hours	**5,400 h., 180 CP**		**900 h, 30 CP**	**900 h, 30 CP**

2nd major, elective: Requires 2 additional semesters 1,800 h., 60 CP

Table 3: General overview of the Bachelor's Degree course of studies on Conservation and Restoration (B.Sc.) in standard period of study with integration of a second major

Study plan for Bachelor's program in Conservation and Restoration (B.Sc.): Regular number of study semesters + 2nd major										
Modules	Name Module groups		BK1 1st semester	BK2 2nd semester	BK3 3rd semester	BK4 4th semester	*elective*	*elective*	BK5 5th semester	BK6 6th semester
			Basic studies	Basic studies	1st major	1st major	*2nd major*	*2nd major*	1st major	Major(s)
BKX-1	Project work	**WP**	BK1-1 (6 CP)	BK2-1 (6 CP)	BK3-1 (6 CP)	BK4-1 (6 CP)	*BK3-1 (6 CP)*	*BK4-1 (6 CP)*	Practical phase BK5-1 (30 CP)	BK6-1 (3 CP)
							Practical phase BK5-1 (12 CP)	*Practical phase BK5-1 (12 CP)*		
BKX-2	Preventive conservation	**P**	BK1-2 (6 CP)	BK2-2 (6 CP)	BK3-2 (6 CP)	BK4-2 (6 CP)				
BKX-3	Material science	**P**	BK1-3 (3 CP)	BK2-3 (3 CP)	BK3-3 (3 CP)	BK4-3 (6 CP)				
BKX-4	Academic research / Documentation	**P**	BK1-4 (3 CP)	BK2-4 (3 CP)						Thesis BK6-4 (12 CP)
BKX-5	Art history, restoration theory	**P**	BK1-5 (6 CP)	BK2-5 (6 CP)	BK3-5 (3 CP)					
BKX-6	Conservation /restoration techniques	**P/WP**		BK2-6 (3 CP)	BK3-6 (6 CP)	BK4-6 (12 CP)	*BK3-6 (6 CP)*	*BK4-6 (12 CP)*		BK6-6 (12 CP)
BKX-7	Materials science and technology	**P/WP**	BK1-7 (3 CP)	BK2-7 (3 CP)	BK3-7 (6 CP)		*BK3-7 (6 CP)*			
BKX-8	Individual profile studies – HAWK plus	**WP**	BK1-8 (3 CP)							BK6-8 (3 CP)
	Goal/ Credit points per semester:		30 CP	30 CP	30 CP	30 CP	*30 CP*	*30 CP*	30 CP	30 CP

Basic studies for all students
Specialized studies in 1st major chosen *Elective*
Specialized studies in 2nd major chosen
HAWK plus offers

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Artistic Techniques**	**BK1-1**	WP	11.10.2020
Study semester: 1st semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: 2 block weeks		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

Students choose a course on the general topic of "artistic techniques"

- Can identify artistic forms of expression
- Understand the artistic process and the principles of artistic design
- Apply the relevant working techniques
- Apply and evaluate artistic means of design according to the example of traditional art and cultural heritage
- Develop sensitivity and perceptiveness for their own practice

Contents:

- Working techniques (history, workmanship) and required materials (properties, production)
- Practical-experimental copy of artistic techniques after viewing
- Practical examples in various fields of fine and applied arts
- University courses: Book painting, modeling, carving, drawing, etc.

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
D'ham, Rittmeier, 3 LVS each	6 LVS	Course attendance time		Home study	
Assistant lecturer	3 LVS	Lecture	15 h	Course accompanying and exam preparation	120 h
Assistant lecturer	3 LVS	Exercise	45 h		
	-	Other			
Total classroom time	**12 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Basic Principles of Preventive Conservation**	**BK1-2**	P	10.11.20
Study semester: 1st semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: -	Responsible for module: Prof. Dr. Michael von der Goltz	Type of teaching, group size, if applicable: Weekly lectures, external courses		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

- Knowing the meaning, basic principles and contents of preventive conservation
- Application and transfer to groups of objects and inventories in different environments (secular buildings, sacred buildings, museums, libraries, archives, storage facilities)
- Assessment of exogenous influences on objects: Building situation, storage conditions, public traffic, use

Contents:

- Contents of preventive conservation with a focus on damage prevention
- Importance and content in different areas: Archive/ library/ museum/ preservation of historical monuments
- Proper storage in storage facilities
- Basics of physics: electromagnetic radiation as well as effects of radiation (especially light) and further environmental factors such as temperature, (air) humidity, pollutants of the air, oxygen but also salt crystallization cycles, impurities, microorganisms as well as insects and hazards for organic and inorganic materials/objects
-

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
von der Goltz/Schütz/Schieweck/Leuckfeld	1 LVS	Course attendance time		Home study	
Assistant lecturer	1 LVS	Lecture	60 h	Course accompanying and exam preparation	120 h
H. Schulz	2 LVS	Exercise			
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Inorganic Chemistry and Materials**	**BK1-3**	P	28.02.2019
Study semester: 1st semester / Offered in: WS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Henrik Schulz	Type of teaching, group size, if applicable: Weekly lectures & supervised exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Good knowledge of chemistry/physics or participation in introductory course
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Written examination (K2) -	

Module objectives/desired learning outcomes:

Inorganic chemistry:
- Knowledge of relevant inorganic colorants and construction binders
- Knowing relevant mineral components e.g. in plasters, mortars, paper

Contents:

Inorganic chemistry:
- Phenomenon of color, interactions between light and matter, color theories
- Precipitation and complex formation reactions, pigment production
- Precipitation and complex formation reactions using test tube experiments, thermal and chemical ageing of pigments
- Wet chemical and polarization microscopic identification of selected pigments
- Introduction to light microscopy (esp. polarized light microscopy PLM)
- Carbonate and hydraulic construction binders and additives (lime circuit, water glasses, gypsum, cement, carbonates)

Setting processes, sol-gel transitions, solidification
- Basic principles of electrochemistry, electrochemical voltage series
- Demonstration of electrolytic processes (partly as multimedia demo)
- Metal corrosion and "patina" formation
- Final practical course in pigment analysis 1 (basic practical course BA), dissolution using diluted mineral acids, wet chemical pigment identification, practical light microscopy on selected pigments, pigment identification using polarization microscopy (basic course)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
H. Schulz	2 LVS	Course attendance time		Home study	
M. Schulz	2 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
	-	Exercise	15 h		
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**90 h**

Optional extra

Exam preparation supervised in tutorials

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Basic Principles of Academic Research**	**BK1-4**	P	18.03.2020
Study semester: 1st semester / Offered in: WS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Ursula Schädler-Saub	Type of teaching, group size, if applicable: Weekly lecture & exercises		
Can also be credited to study program: -		Language of instruction: German		
Requirements according to examination regulations		Recommended prerequisites: Basic principles of academic research/writing		
Study/examination achievements/ examination types: Student research paper with colloquium -		If applicable, weighting of the study/examination achievements		

Module objectives/desired learning outcomes:

Getting the most out of using libraries, archives and internet resources
- Making a correct bibliography and citations in the structure and elaboration of an academic text
- Ability to deal critically with literature and sources of all kinds
- Ability to logically structure and systematically build up an academic text and to illustrate it appropriately with photos, graphics, etc.
- Ability to write an academic text in clear and easily understandable language
- Mastering the basics of documentation in text and image, with the use of appropriate software and technical proficiency in digital text and image processing

Contents:

Methods and techniques of academic work, with exercises
- Literature and source research, bibliography, citation, with exercises
- Basic principles of source criticism, with exercises
- Basic principles of paleography, with exercises
- Use of libraries and archives and their online catalogs, with exercises
- Use of internet resources, with exercises
- Application of digital text and image editing programs, to create scientific documentation
- Basic principles for the outline and layout of an academic text, including illustrations, with exercises
- Basic principles for creating a stylistically successful, easy-to-read academic text, with exercises

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Leuckfeld, Hähner	1 LVS	Course attendance time		Home study	
Schütz	1 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
Assistant lecturer	1 LVS	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

E-learning course in academic work offered by the Hornemann Institute

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Art History 1, Restoration Ethics**	**BK1-5**	P	28.02.2019
Study semester: 1st semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Ursula Schädler-Saub	Type of teaching, group size, if applicable: Weekly lectures, external exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Basic knowledge of general art history
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Seminar paper Student research paper with colloquium	Seminar paper: 50% oral presentation with feedback, 50% written paper

Module objectives/desired learning outcomes:

- Understand and apply proper terminology of conservation/restoration, historic preservation, and restoration ethics
- Knowledge and understanding of various ethical and aesthetic views of conservation/restoration from the 19th century to the present

- Describe, understand and historically correctly classify iconography, formal characteristics, stylistic developments and specific aesthetic and historical qualities of art and cultural property
- Understand evidence of art and cultural history in their historical context, their function and significance, also with regard to later changes through use, revision and restoration
- Understand special areas and individual examples of art and cultural history in terms of their aesthetic and cultural significance, train the eye to recognize specific stylistic features and aesthetic qualities

Contents:

- Basic concepts and fundamental papers on the conservation and preservation/restoration of art and cultural property, explained using examples from all disciplines of conservation/restoration
- Change in the definition of conservation/restoration from the 19th century to today
- Basic concepts of monument preservation, explained by examples of architectural and artistic monument preservation
- Introduction to restoration ethics, terms and principles
- History of art in Germany from Charlemagne to the age of the Reformation, explained by examples of architecture and interior decoration, applied art, architectural sculpture and small sculpture, painting and book illustration Exercises in describing and classifying works of art from the Middle Ages
- Cultural monuments and works of art of the Middle Ages in Hildesheim, art historical and restoration topics
- Selected topics in iconography
- Art history of ornamentation: Development of architectural and ornamental forms from antiquity to the late Gothic period
- Art history of furniture from antiquity to the late Gothic period
- Cultural monuments and works of art of the late Gothic and Renaissance periods in Nuremberg, topics related to art history, restoration and monument preservation

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Schädler-Saub	4 LVS	Course attendance time		Home study	
of those Albrecht 0.8 LVS and	-	Lecture	45 h	Course accompanying and exam preparation	120 h
Assistant staff members 0.6 LVS	-	Exercise	15 h		
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Individual consultations for the preparation of student research projects or papers presented in written form

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Materials Science - Production, Extraction**	**BK1-7**	P	12.10.2020
Study semester: 1st semester / Offered in: WS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Julia Schultz	Type of teaching, group size, if applicable: Weekly lectures & supervised exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
- -	Confirmation of participation, examination in the 3rd semester 2nd semester

Module objectives/desired learning outcomes:

- Knowledge of important material groups and manufacturing techniques and historical usage
- Knowledge of the properties and structure of materials
- Knowledge of the typology and characteristics of historical techniques in the craft and artistic fields
- Mastery of the terminology
- Evaluation of production methods and artistic means of design on the basis of examples of traditional art and cultural assets

Contents:

- Introduction to important organic and inorganic material groups relevant to all majors: Colorants and drawing materials, wood, paper, fabric, leather, parchment, mineral materials
- Time-related and spatial classification of historical extraction and production techniques including production conditions
- Basic properties, material structure
- Historical traditions and innovation in the field of materials production and processing
- Time-related and spatial classification of historical processing and finishing techniques
- Time-related and spatial classification of artistic techniques
- Terminology, tools and equipment
- Practical examination of different materials (production/preparation)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for majors	1 LVS	Course attendance time		Home study	
Assistant staff members for majors	1 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
Stadbauer 0.3 LVS/Klein 0.7 LVS	1 LVS	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Individual Profile Studies: HAWK plus**	**BK1-8**	WP	11.10.2020
Study semester: 1st semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Michael von der Goltz	Type of teaching, group size, if applicable: Weekly lectures		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
- -	Confirmation of participation

Module objectives/desired learning outcomes:

This course is based on the guiding principle of making a comprehensive contribution to the development of students' competencies with regard to their ability to study, their professional skills, and their social skills.
- Initiation and promotion of interdisciplinary approaches in teaching and research
- Development and offer of interdisciplinary teaching and learning concepts
- Teaching and practicing of interdisciplinary competencies
- Addition of interdisciplinary content to the courses offered in the degree programs
- Provision of multiple qualifications and profile building for students

Recommended:
Language courses and business administration

Contents:

The range of courses includes accreditable courses from the contexts "Entrepreneurial Thinking and Action", "Leadership", "Communication and Individual Competencies" "Social Responsibility with respect to Volunteer Work", "Specific Professionalization" and "Languages", which the students select within the study programs to earn 6 credit points. Of course, the courses are evaluated to ensure the teaching quality. The range of courses offered is compiled each semester according to student needs and demands in the degree programs.
The courses aim at the integrative teaching of professional, methodological, social and personal competencies and place equal emphasis on both academic and practical perspectives. In the Individual Profile Studies, modern teaching and learning formats are provided to complement the conventional lecture, seminar and project courses of the degree programs and expand them in terms of content and methodology across the different disciplines.
As a result, the Individual Profile Study Program enables students to develop their own individual profiles based on their interests and inclinations.

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
N.N., from HAWK plus	3 LVS	Course attendance time		Home study	
	-	Lecture	30 h	Course accompanying and exam preparation	45 h
	-	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Historical Techniques, Copy**	**BK2-1**	WP	11.10.20
Study semester: 2nd semester / Offered in: SS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: 2 block weeks		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

Students choose two courses of one week each on the general topic "Historical Techniques and Copy"

- Understanding historical forms of expression in the context of art and cultural assets
- Understanding the manufacturing process and the principles of design
- Application of the relevant copy techniques
- Reproduction of working techniques based on the example of the traditional art and cultural heritage
- Eye training (recognition of characteristic features), assessment competence
- Training of fine motor skills

Contents:

- Working techniques (history, workmanship) and required materials (properties, production)
- Practical-experimental copy of historical work techniques after viewing
- Practical examples in various fields of the production of art and cultural property
- University courses: Printing techniques (printmaking techniques, letterpress), gilding, icon, fresco, sculpture, etc.

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Birkenbeul	1 LVS	Course attendance time		Home study	
Buchholz	1 LVS	Lecture	15 h	Course accompanying and exam preparation	120 h
Rittmeier	1 LVS	Exercise	45 h		
Ellesat and Dham, 0.5 LVS each	1 LVS	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Building Physics – Basic Studies**	**BK2-2**	P	18.03.2020
Study semester: 2nd semester / Offered in: SS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Karin Petersen	Type of teaching, group size, if applicable: Weekly lectures, some external		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

- Understanding the interrelationships and effects of building design and building physics on indoor climate and property maintenance on the basis of selected examples
- Assessment and application of appropriate preventive measures
- Understanding monitoring programs for the issue at hand
- Proficiency in teamwork, technical discussion, and presentation of factual information

Contents:

- Basic studies on building physics
- Significance of thermal insulation, temperature constancy, moisture protection, sound insulation, pollutant protection, the effects of building materials and building climatic boundary conditions on the building enclosure, room climate and specific objects (cultural assets) are presented for different buildings on the basis of selected examples
- Suitable testing and measuring methods
- Student research papers written individually or in group work
- Necessity of cooperation with other disciplines (collection managers, civil engineers, etc.)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Assistant lecturer	4 LVS	Course attendance time		Home study	
	-	Lecture	45 h	Course accompanying and exam preparation	120 h
	-	Exercise	15 h		
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Organic Chemistry and Materials**	**BK2-3**	P	19.03.2019
Study semester: 2nd semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Henrik Schulz	Type of teaching, group size, if applicable: Weekly lectures & supervised exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Successful completion of module BK1-3
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Written examination (K2) -	

Module objectives/desired learning outcomes:

Organic chemistry:
- Reliable recognition of groups of substances in organic chemistry on the basis of their structural formulas and their typical functional groups
- Transfer of this knowledge to natural binders, reliable recognition of corresponding structural formulas and assignment to the natural substance groups of lipids, terpenes, carbohydrates and proteins

Contents:

Organic chemistry:
- Introduction to organic chemistry on the basis of characteristic structural formulas and functional groups
- Demonstration of organic reactions using multimedia presentations
- Demonstration of characteristic material properties of natural binders (lipids, terpenes, carbohydrates, proteins) using test tube experiments, development of binder tests for identification
- Introduction to cellulose chemistry
- Introduction to dye chemistry, natural and historical synthetic dyes
- Final practical course in "Binder group tests and histochemical staining" (BA basic practical course)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Thielmann	2 LVS	Course attendance time		Home study	
M. Schulz	2 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
	-	Exercise	15 h		
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**90 h**

Optional extra

Tutorial for exam preparation

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Analysis of Condition, Documentation**	**BK2-4**	P	18.03.2020
Study semester: 2nd semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Weekly lectures & exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

- Knowledge of the respective systematics for viewing the objects
- Understanding the tool mapping analog and digital
- Understanding of the respective systematics for the description of the objects under consideration
- Understanding the possibilities of object photography (incident light, transmitted light, grazing light, UV, IR)
- Knowledge of digital image processing in Photoshop

Contents:

- Theory of systematics and implementation of object examination, description, photography
- Contents as well as exercises in manual mapping
- Basic principles of object photography: Photographic techniques in incident light, grazing light, transmitted light, IR, UV
- Processing digital images with Photoshop
- Archiving and handling digital images
- Knowledge of equipment, equipment maintenance

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for majors, 0.3 each	1 LVS	Course attendance time		Home study	
Leuckfeld	1 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
Assistant lecturer	1 LVS	Exercise	15 h		
	-	Other			
Total classroom time	**3.3 LVS**	**Total workload**			**90 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Art History 2, Restoration History**	**BK2-5**	P	18.03.2020
Study semester: 2nd semester / Offered in: SS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Ursula Schädler-Saub	Type of teaching, group size, if applicable: Weekly lectures, external exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Basic knowledge of general art history
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Seminar paper Student research paper with colloquium	Seminar papers: 50% oral presentation, 50% written paper

Module objectives/desired learning outcomes:

- Know and understand the major historical development of restoration views and principles, recognize their impact on the appearance and state of preservation of works of art today
- Knowledge and understanding of the major theoretical positions in historic preservation from the 19th century to the mid-20th century, recognizing their impact on the historical and contemporary practice of preserving cultural monuments
- Describe, understand and historically correctly classify image programs, formal characteristics, stylistic developments and specific aesthetic and historical qualities of art and cultural assets
- Understand evidence of art and cultural history in their historical context, their function and significance, also with regard to later changes through use, revision and restoration
- Understand special areas and individual examples of art and cultural history in terms of their aesthetic and cultural significance, train the eye to recognize specific stylistic features and aesthetic qualities

Contents:

- Care, revision and restoration of works of art from the Renaissance to the 19th century, an overview based on selected examples
- Overview of the history of restoration and preservation from the 19th century to the mid-20th century, theoretical positions and practical implementation
- History of art in Germany from the 16th to the early 20th century, explained by selected examples of architecture and interior decoration, applied art, sculpture, painting, book illustration, drawing and printmaking, with exercises in describing and classifying works of art from this period

- Cultural monuments and works of art of the Renaissance and Baroque in Hildesheim, in-depth study of topics related to art history and restoration
- Selected topics in iconography
- Art history of the ornament: a survey of the development of architectural and ornamental forms from the Renaissance to Historicism
- Art history of furniture from the Renaissance to Historicism on the basis of selected examples
- Cultural monuments and works of art from the early Baroque to the period around 1900 in Munich, in-depth study of topics related to art history, restoration and preservation of historical monuments

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Schädler-Saub	4 LVS	Course attendance time		Home study	
of those Albrecht 0.8 LVS and	-	Lecture	45 h	Course accompanying and exam preparation	120 h
Assistant staff members 0.6 LVS	-	Exercise	15 h		
	-	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Individual consultations for the preparation of student research projects or papers presented in written form

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Examination and Measurement Technology**	**BK 2-6**	P	01.03.2019
Study semester: 2nd semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Weekly lectures & exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
- -	Confirmation of participation

Module objectives/desired learning outcomes:

- Knowledge of the basics of measurement and instrumentation technology
- Understanding how relevant instruments and equipment work and being able to use them properly
- Understanding the basic measurements required to determine material characteristics
- Understanding the interpretations of the findings

Contents:

Methodology and technology of measurement and instrumentation:
- Visual examinations: Digital microscopy
- Colorimetric measurements
- The Oddy test
- Length, thickness and volume measurement, weighing, material characteristics
- Climate measuring devices, calibration of the devices
- Lux meters, UV measurement
- Wood moisture, material moisture measurement
- Introduction to pH value measurement and determination of conductivity

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Buchholz, D`ham 0.2 LVS each, Birkenbeul 0.6 LVS	1 LVS	Course attendance time		Home study	
Rittmeier, M. Schulz 0.5 LVS each	1 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
Ellesat	1 LVS	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Finishing Techniques, Object Structure**	**BK2-7**	P	12.10.2020
Study semester: 2nd semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Julia Schultz	Type of teaching, group size, if applicable: Lectures, practical exercises with supervision		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	BK1-3; BK 1-7; BK 2-3
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
- -	Confirmation of participation, examination in the 3rd semester

Module objectives/desired learning outcomes:

- Understanding of important organic and inorganic object and material groups, including their manufacturing techniques
- Knowledge of the typology and characteristics of historical materials and techniques in the craft and artistic fields
- Mastering and using technical terminology
- Qualitative assessment of manufacturing methods
- Knowledge of finishing techniques and artistic means of design on traditional art and cultural assets

Contents:

Introduction to important material finishing techniques relevant to all majors, e.g., gilding, specialty and colored papers (including wallpaper), woodworking (surface finishing)
- Introduction to special materials relevant to all majors: Ivory, metals, textiles
- Time-related and-spatial classification of historical manufacturing techniques in the context of production conditions
- Basic properties, material structure
- Historical traditions and innovation in the field of materials production and processing
- Time-related and spatial classification of historical processing and finishing techniques
- Time-related and spatial classification of artistic techniques
- Terminology, tools and equipment
- Practical examination of different materials (production/preparation)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for majors	1 LVS	Course attendance time		Home study	
Assistant staff members for the majors	1 LVS	Lecture	45 h	Course accompanying and exam preparation	45 h
Klein	1 LVS	Exercise			
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Practical Conservation**	**BK3-1**	WP	11.10.2020

Study semester	Offered in	Credit points	Semester week hours
3rd semester	WS	6 CP	4 SWS

Allocation to study specialization	Responsible for module	Type of teaching, group size, if applicable
All	Prof. Ulrike Hähner	2 block weeks
Can also be credited to study program		Language of instruction
-		German

Requirements according to examination regulations	Recommended prerequisites
	BK 3-6
Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

- Understanding basic visual examination methods (objects, materials) for condition assessment based on external characteristic features
- Assessment of the condition of a material/ object/ inventory on the basis of the specific material structure
- Understanding the methods of preventive conservation and stabilizing conservation
- Understanding of basic material properties of selected originals
- Understanding manufacturing methods and material properties resulting from them
- Understanding the basic causes of damage and applying damage prevention measures
- Use of simple documentation systems

Contents:

The module builds on the knowledge communicated in module BK 3-6 Conservation and Restoration.

- Handling historical objects
- Eye training: Objects/ inventories including authenticity characteristics
- Methods of securing, examining and describing the condition (including exercises of emergency securing and its professional documentation)
- Causes of damage, significance of exogenous and endogenous influences and their effects on materials/objects/inventories
- Basic damage prevention measures in connection with workshop work (theory and exercises)
- Basic conservation measures (e.g. protective cardboard, covers, enclosures, transport protection)
- Methods of stabilizing conservation on objects (theory and exercises)
- Advanced technical terminology (exercises)

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for majors	4 LVS	Course attendance time		Home study	
Assistant staff members for majors	4 LVS	Lecture	15 h	Course accompanying and exam preparation	120 h
	-	Exercise	45 h		
	-	Other			
Total classroom time	**8 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Microbiology – Basic Studies**	**BK3-2**	P	01.03.2019
Study semester: 3rd semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: -	Responsible for module: Prof. Dr. Karin Petersen	Type of teaching, group size, if applicable: Lecture and practical training		
Can also be credited to study program: -		Language of instruction: German		
Requirements according to examination regulations: Bachelor		Recommended prerequisites		
Study/examination achievements/ examination types: Written examination (K1) -		If applicable, weighting of the study/examination achievements		

Module objectives/desired learning outcomes:

- Acquisition of basic microbiological knowledge in the context of restoration issues
- Recognition and evaluation of clear microbial contamination of art and cultural property
- Knowledge of basic measures to reduce or prevent damage caused by microbes
- Knowledge and assessment of health risks due to objects contaminated with microbes
- Understanding of simple microbiological working techniques (sampling/analytical methods)

Contents:

Teaching of the basic principles of microbiology (including presentation of relevant groups of microorganisms, cell structure, enzymatic principles, metabolism such as respiration, fermentation and photosynthesis)
Conditions for the growth of microorganisms (e.g. climate, nutrient requirements, water activity)
Introduction to microbial destruction processes on art and cultural property (material degradation, discoloration, acid damage, corrosive biofilms, etc.)
Introduction to ways to reduce microbial contamination through physical and chemical methods (air conditioning, microwaves, light wavelengths, biocides, etc.)
Introduction to health hazards caused by microorganisms (diseases, mycotoxins, protective measures (PPE), limit and guideline values)
Theoretical basics of microbial detection methods (sampling techniques, microscopic examinations, PAS staining, airborne germ measurements, ATP test, molecular biological and immunological analysis methods, etc.) Practical training phase:
Performance of common sampling techniques (stamp and swab sampling, airborne germ measurement, vitality and activity detection)
Introduction to assessment of microscopic preparations of infested objects (adhesive film preparations, material samples, etc.)
Performance of laboratory tests to assess the potential for damage

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Möhlenhoff	4 LVS	Course attendance time		Home study	
Fritz	2 LVS	Lecture	30 h	Course accompanying and exam preparation	120 h
	-	Exercise	30 h		
	-	Other			
Total classroom time	**6 LVS**	**Total workload**			**180 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Polymer Chemistry– Basic Studies**	**BK3-3**	P	01.03.2019
Study semester: 3rd semester / Offered in: WS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Henrik Schulz	Type of teaching, group size, if applicable: Weekly lectures & exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Modules BK1-3 and BK2-3
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
- -	Confirmation of participation

Module objectives/desired learning outcomes:

Polymer chemistry:
- Recognize polymers reliably on the basis of their monomer building blocks (relates to materials, adhesives)
- Understanding possible aging phenomena of polymeric materials based on structure-property relationships
- Transfer of this knowledge to selected conservation materials and early historic plastics on art objects
- Application of the structure-property relationships taught of organic molecules to practical problems in the dissolving and swelling of adhesives and plastics

Contents:

Polymer chemistry:
- Introduction to organic chemistry on the basis of characteristic structural formulas and functional groups
- Demonstration of polymerization, polycondensation and polyaddition through multimedia presentations
- Demonstration of characteristic material properties by multimedia presentations, development of preliminary samples (especially by pyrolysis) for selected polymers
- Polymeric materials in conservation and restoration, production and application
- Evaluation criteria for the use of polymeric materials in conservation and restoration
- Classification of organic solvents on the basis of dispersion, dipole and H-bridge forces
- Explain interactions between different molecules via secondary bonding forces (van der Waals' forces)
- Solvent chemistry, evaluating interaction forces when dissolving binders (natural and synthetic) in typical solvents
- Basic knowledge of colloid chemistry for the classification and evaluation of dispersions
- Using and working with the solvent triangle, dissolving and swelling of adhesives and plastics
- Discussion of simple case studies

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
H. Schulz	2 LVS	Course attendance time		Home study	
Stadlbauer	1 LVS	Lecture	45 h	Course accompanying and exam preparation	45 h
	-	Exercise			
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**European Art History**	**BK3-5**	P	18.03.2020
Study semester: 3rd semester / Offered in: SS		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Ursula Schädler-Saub	Type of teaching, group size, if applicable: Weekly lectures, external exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Basic knowledge of general art history
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Seminar paper Student research paper with colloquium	Seminar paper: 50% oral presentation with feedback, 50% written paper

Module objectives/desired learning outcomes:

- Know and understand basic theoretical considerations of restoration, recognize their importance to the practice of restoration
- Recognize and understand issues of restoration aesthetics in the presentation of artworks and the correction of defects; ability to conceptually translate these insights into practice
- Describe, recognize, and understand the iconography, stylistic features, and art and cultural historical significance of selected works of art and groups of objects from various European countries, in a pan-European context
- Eye training: Describe, recognize and understand artistic signatures and specific aesthetic qualities of selected works of art and groups of objects from different European countries, also in relation to the artistic materials and techniques used

Contents:

- Introduction to Alois Riegl's "historical monument values" and their significance for the theory and practice of restoration
- Introduction to the Theory of Restoration by Cesare Brandt and its significance for the practice of restoration
- Overview of the current theoretical positions on restoration
- Restoration aesthetics: Presentation of fragmentary works of art; basic considerations and methods in the correction of defects
- Gothic and Renaissance book illustration: European examples
- Painting, drawing and prints of the Italian Renaissance
- Sculpture of the Italian Renaissance
- Court furniture in Europe
- Furniture and interior decoration of the Biedermeier period
- Bauhaus architecture and design
- Selected examples of European works of art in museums and collections, external meetings to deepen understanding of art historical and restoration topics in museums and collections in Hannover, Braunschweig and Kassel

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Schädler-Saub	3 LVS	Course attendance time		Home study	
	-	Lecture	45 h	Course accompanying and exam preparation	45 h
	-	Exercise			
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Individual consultations for the preparation of student research projects or papers presented in written form

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Stabilizing Conservation**	**BK 3-6**	WP	11.10.2020
Study semester: 3rd semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 6 SWS
Allocation to study specialization: Archive material, book and graphics	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Weekly lectures, exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Student research paper with colloquium -	Student research paper 75%, colloquium 25%

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

Learning goals:
- Application of conservation science examination methods and systematics, including documentation
- Understand the basic cleaning methods as well as conservation stabilization measures to maintain existing condition with respect to major
- Use of selected techniques on test specimens
- Apply selected conservation methods and techniques to own objects under supervision
- Evaluation of work results

Contents:

Description of contents:
- Concept of stabilizing conservation according to DIN EN 15898:2011-12
- Methods of cleaning/ Methods of securing material
- Other specific methods of conservation/damage prevention for exogenous and endogenous damage
- Recognize and evaluate material properties of the historical materials
- Requirements for conservation materials to be used and control options
- Effects of historic preservation measures that have already been carried out and possibilities of evaluation
- Inclusion of case studies in teaching
- Methodology/systematic approach of the investigation and practical work including its documentation for tracing purposes
- Application of theory in practice on test specimens and own objects
- Methods of quality control/ assurance of effectiveness

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for majors, 2 LVS each	4 LVS	Course attendance time		Home study	
Professor for majors, 2 LVS each	4 LVS	Lecture	30 h	Course accompanying and exam preparation	90 h
Assistant staff member for majors, 2 LVS each	4 LVS	Exercise	60 h		
Assistant staff member for majors, Schulz, 2 LVS each	4 LVS	Other			
Total classroom time	**16 LVS**	**Total workload**			**180 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Materials Science - Subject-Specific**	**BK 3-7**	WP	10.10.2020
Study semester: 3rd semester / Offered in: WS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Julia Schultz	Type of teaching, group size, if applicable: Weekly lectures, exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Written examination (K2) Student research paper with colloquium	Examination depends on the major

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

Learning goals:
- Understand the basic properties of the major material groups of each major from ancient to modern times
- Understanding of the basic manifestations – also in material combinations
- Understanding terminology with emphasis on the historical language of craftsmen and artists
- Knowing the problems involved in the perpetuation of material and recipe knowledge
- Distinction between products from artisanal and (early) industrial production

Contents:

- Communication of material and manufacturing history as well as material use
- Development of the preparation of natural materials for use in the trades and art
- Historical material treatment, properties of materials, chemical structure and aging behavior
- Importance of material science examination methods
- Structure of historical objects (materials, production techniques of art and cultural objects)
- Practical-experimental reconstruction of relevant craft/artistic techniques according to historical instructional literature, largely using traditional materials
- Etymological derivation and interpretation of historical terminology

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professors for major 1, 2, 2 LVS each	4 LVS	Course attendance time		Home study	
Professors for major 3, 4, 2 LVS each	4 LVS	Lecture	30 h	Course accompanying and exam preparation	120 h
Assistant staff members for major 1, 2, 1 LVS each	2 LVS	Exercise	30 h		
Assistant staff members for major 3, 4, 1 LVS each	2 LVS	Other			
Total classroom time	**12 LVS**	**Total workload**			**180 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Practical Restoration**	**BK4-1**	WP	10.10.2020

Study semester	Offered in	Credit points	Semester week hours
4th semester	SS	6 CP	4 SWS

Allocation to study specialization	Responsible for module	Type of teaching, group size, if applicable
All	Prof. Ulrike Hähner	2 block weeks
Can also be credited to study program		Language of instruction
-		German

Requirements according to examination regulations	Recommended prerequisites
	BK 4-6

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

- Assessment of the material structure of an object / inventory
- Understanding the importance of conservation goals of restoration (use, presentation)
- Understanding the basic restoration methods of the respective major
- Use of selected techniques on test specimens and on real objects
- Understanding the specific assessment criteria after applying the techniques (work results)
- Advanced training in team work

Contents:

The module builds on the knowledge communicated in module BK 4-6 Conservation and Restoration.

- Restoration measures on selected objects (project)
- Specific methods of restoration in case of exogenous and endogenous damage, e.g. methods of cleaning, stabilization, defect correction, also methods of retouching
- Exercises for the precise recording of material changes, structure (before/after)
- Material properties of the originals as well as of the conservation and restoration materials
- Learning/ practicing restoration techniques and applying them to selected objects
- Inclusion of examination and testing methods to evaluate treatment outcomes
- Professional documentation (text, illustrations), importance of a systematic approach
- Methods of quality control/ assurance of effectiveness

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professor for major, 2 LVS each	4 LVS	Course attendance time		Home study	
Assistant staff members, major, 1 LVS each	4 LVS	Lecture	15 h	Course accompanying and exam preparation	120 h
	-	Exercise	45 h		
	-	Other			
Total classroom time	**8 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Exhibition and Presentation**	**BK4-2**	P	18.03.2020
Study semester: 4th semester / Offered in: SS		Credit points: 6 CP		Semester week hours: 4 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Michael von der Goltz	Type of teaching, group size, if applicable: Lecture		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

- Identifying and classifying obvious, specific condition phenomena on different types of objects/materials
- Understanding the durability of different materials and material combinations under current and also feasible conditions of presentation and storage
- Knowing the measures for security in exhibition operations for the objects
- Archiving and handling documentation detailing condition
- Knowing the basic of loaning out objects

Contents:

- Training in the observation and description of material changes in artwork and monitoring
- Preparation of condition reports and condition photography in exhibition operations
- Developing and in some cases executing appropriate preventive measures and monitoring programs for the issue at hand
- Packaging and transport
- Light and protection from light
- Presentation and security
- Climate stability in display cases – Methods of achieving it
- Facility report for exhibitions, basics regarding objects on loan

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
von der Goltz	1 LVS	Course attendance time		Home study	
Assistant lecturer	1 LVS	Lecture	45 h	Course accompanying and exam preparation	120 h
Fritz	1 LVS	Exercise	15 h		
Professor for majors, 0.25 LVS each	1 LVS	Other			
Total classroom time	**4 LVS**	**Total workload**			**180 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	Material Classification, Radiation Examination	**BK 4-3**	P	18.03.2020
Study semester: 4th semester / Offered in: SS		Credit points: 6 CP		Semester week hours: 5 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Lectures and block courses		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Student research paper with colloquium -	

Module objectives/desired learning outcomes:

- Knowing and understanding the basic methods of materials testing for the detection and classification of materials and material components, also for the evaluation of aging behavior and resistance, and for the detection of hazardous materials (components hazardous to health, biocide-contaminated materials)
- Knowing and understanding basic methods and options of radiation examination

Knowing and understanding the basic methods of the major chosen
- Wood type classification
- Paper examination: Raw materials, sizing and mechanical properties
- Examination methods and structural description for stone and mortar
- Identification of painting and writing materials

Contents:

- Basic principles of recognizing and classifying materials, material components and properties according to Schramm/Hering

Specific according to major (exercises in groups):
- Paper examination: Ingredients/sizing/ pH and mechanical properties, basic principles of determining paper and textile fibers
- Microscopic wood type classification
- Examination methods for stone and mortar: Water absorption and release, ultrasound, strength, stretch, material identification and structure description
- Critical discussion of the study results, block courses

Basic physical principles of radiation examination (3 days)
- Examination by means of IR radiation (focus), UV radiation, X-rays, XRF, XRD
- Properties, generation, equipment, case studies

Workshop on the study of degraded and biocide contaminated materials (2 days):
- Active substances, history of pest control, occupational health and safety, presentation of instrumental analysis, practical laboratory course

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
H. Schulz, M. Schulz, Möhlenhoff, 1 LVS each	3 LVS	Course attendance time		Home study	
Buchholz, Birkenbeul, 0.5 LVS	1 LVS	Lecture	60 h	Course accompanying and exam preparation	105 h
Assistant lecturer	1 LVS	Exercise	15 h		
Professors for majors, 0.5 LVS each	2 LVS	Other			
Total classroom time	**7 LVS**	**Total workload**			**180 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Restoration Methods**	**BK 4-6**	WP	19.03.2019
Study semester: 4th semester / Offered in: SS		Credit points: 12 CP		Semester week hours: 6 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Weekly lecture & exercises		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Student research paper with colloquium -	Student research paper 75%, colloquium 25%

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

Learning goals:
- Understanding the basic methods of stabilizing conservation for the respective major
- Understanding the basic restoration methods of the respective major
- Use of selected techniques on test specimens
- Apply selected conservation methods and techniques to own objects under supervision
- Evaluation of work results

Contents:

- Repeating and reinforcing methods of stabilizing conservation and, based on this, methods of restoration, see below
- Concept of restoration according to DIN EN 15898:2011-12
- Methods of cleaning/methods of stabilization/ retouching methods
- Specific methods of restoration in case of severe exogenous and endogenous damage
- Material properties of the originals as well as of the restoration materials
- Effects of historical restoration/preservation measures
- Use of theory in practice, case studies
- Opportunities for professional discussion with collection managers about conservation goals and requirements for long-term preservation
- Importance of a systematic approach and its documentation (traceability)
- Methods of quality control/ assurance of effectiveness

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professors for polychrome wooden objects, furniture, 3 LVS each	6 LVS	Course attendance time		Home study	
Professors for archive material, stone objects, 3 LVS each	6 LVS	Lecture	45 h	Course accompanying and exam preparation	240 h
Assistant staff members for major 1, 2, 3 LVS each	6 LVS	Exercise	75 h		
Assistant staff members for major 3, 4, 3 LVS each	6 LVS	Other			
Total classroom time	**24 LVS**	**Total workload**			**360 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Practical Training Phase**	**BK 5-1**	WP	11.10.2020
Study semester: 5th semester / Offered in: WS		Credit points: 30 CP		Semester week hours: 1 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: Practical semester, 18 weeks		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Project work with colloquium -	Project work 75%, colloquium 25%

Module objectives/desired learning outcomes:

- Contacting suitable institutions – offices for the preservation of historical monuments, archives, libraries, restoration workshops/companies – with the aim of obtaining an internship position
- Expanding the professional horizon
- Getting to know real work situations and team work, integration into existing structures/workflows
- Assessing the skills and abilities acquired so far; comparison with the requirements in actual practice
- Documentation and evaluation of at least two conservation or restoration works carried out during the internship
- Writing up an internship report according to specifications

Contents:

- Communication with employers
- Integration into existing work teams and workflows
- Putting the knowledge acquired so far into practice
- Accepting work tasks with targets and deadlines
- Reflection of the knowledge acquired so far on the basis of real work situations (also in the team)
- Content and forms of restoration documentation from other institutions
- Writing up an internship report, taking into account the basic principles of academic research/writing

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professors for majors, 0.7 LVS each	1 LVS	Course attendance time		Home study	
	-	Lecture		Course accompanying and exam preparation	890 h
	-	Exercise			
	-	Other	10 h		
Total classroom time	**1 LVS**	**Total workload**			**900 h**

Optional extra

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Thesis Preparation**	**BK6-1**	WP	11.10.2020

Study semester	Offered in	Credit points	Semester week hours
6th semester	SS	3 CP	3 SWS

Allocation to study specialization	Responsible for module	Type of teaching, group size, if applicable
All	Prof. Dr. Ursula Schädler-Saub	1 block week
Can also be credited to study program		Language of instruction
-		German

Requirements according to examination regulations	Recommended prerequisites
	Basic knowledge of academic writing

Study/examination achievements/ examination types	If applicable, weighting of the study/examination achievements
Seminar paper -	Seminar paper with feedback

Module objectives/desired learning outcomes:

Compulsory elective module: Students select a course from their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

- Understanding important planning principles of projects as well as the structure and process of the final thesis
- Developing proposals for solutions for the own object of study/ the work assignment
- Mastering research as well as the preparation of work samples (conservation and restoration measures) in connection with the thesis after consultation with professor
- Mastering the basic principles of digital text, image processing and documentation
- Mastering the basic principles of academic research/writing: Research on historical sources, international subject-specific literature
- Ability to convey the results of one's own academic work in a presentation in an appropriate form with good rhetoric, and to convincingly defend one's own hypotheses in a discussion

Contents:

- Structure of final papers, deadlines and time limits
- Development of topics
- Exercises in outlining and designing high-quality academic texts and documentation
- Exercises for the stylistically confident formulation of demanding academic texts
- Exercises for the presentation and discussion of the student's own academic research
- Exercises in documentary photography (with IR, UV photography) and digital image processing
- Exercises on structuring the thesis and on research
- Basic principles of work planning and execution
- Planning the work in the workshop
- Exercises for the presentation and discussion of the student's own academic research

The practical weeks are to be used to prepare the final thesis and to deepen theoretical and practical skills.

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Schädler-Saub	1 LVS	Course attendance time		Home study	
Professor for majors	1 LVS	Lecture	30 h	Course accompanying and exam preparation	45 h
Assistant lecturer	1 LVS	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Bachelor Thesis with Colloquium**	**BK 6-4**	P	01.03.2019
Study semester: 6th semester / Offered in: SS		Credit points: 12 CP		Semester week hours: 1 SWS
Allocation to study specialization: All	Responsible for module: Prof. Dr. Ursula Schädler-Saub	Type of teaching, group size, if applicable		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
	Basic principles of academic research/writing
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
Project work with colloquium -	Written work 75%, colloquium 25%

Module objectives/desired learning outcomes:

- Independent completion of a thesis according to scientific methods within a prescribed period of nine weeks
- Proof of independent, topic-related work on a scientific basis, incorporating the knowledge acquired during the Bachelor's degree program
- Presentation of the results of the work in the form of an academic thesis as well as a colloquium with a short presentation and defense of the work in a professional discussion

Contents:

- Planning of work content and work stages on the basis of the work period
- Presentations of work results
- Examination regulations

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
First supervisor: 0.3 LVS per thesis, maximum of 2 LVS	2 LVS	Course attendance time		Home study	
Second supervisor: 0.1 LVS per thesis, maximum of 2 LVS	2 LVS	Lecture		Course accompanying and exam preparation	350 h
	-	Exercise			
	-	Other	10 h		
Total classroom time	**4 LVS**	**Total workload**			**360 h**

Optional extra

Literature
is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Object Work**	**BK 6-6**	WP	18.03.2020
Study semester: 6th semester / Offered in: SS		Credit points: 12 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module: Prof. Ulrike Hähner	Type of teaching, group size, if applicable: 4 block weeks		
Can also be credited to study program: -		Language of instruction: German		
Requirements according to examination regulations		Recommended prerequisites: BK 3-6, BK 4-6		
Study/examination achievements/ examination types: Project work with colloquium -		If applicable, weighting of the study/examination achievements		

Module objectives/desired learning outcomes:

Compulsory elective module: Students select their major
- Polychrome wooden objects and paintings (1)
- Furniture, wooden objects and material combinations (2)
- Archive material, book and graphics (3)
- Stone objects and architectural surfaces (4)

Learning goals:
- Completion of work started on the object of study
- Use of the basic conservation and restoration methods of the respective major
- Mastery of selected conservation/restoration methods and techniques on the student's own objects under supervision.
- Evaluation of work results
- Mastery of the documentation

Contents:

- Complete work started on objects
- Basic principles of object work with deadlines
- Advanced work on methods of cleaning/methods of stabilization/ retouching methods
- Advanced work on specific methods of preventive conservation, stabilizing conservation and restoration in the case of exogenous and endogenous damage
- Documentation work (preliminary investigations, content and visual description)
- Advanced work on methods of quality control/ assurance of effectiveness

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
Professors for polychrome wooden objects, furniture, 1 LVS each	2 LVS	Course attendance time		Home study	
Professors for archive material, stone objects, 1 LVS each	2 LVS	Lecture		Course accompanying and exam preparation	240 h
Assistant staff members for major 1, 2, 2 LVS each	4 LVS	Exercise	30 h		
Assistant staff members for major 3, 4, 2 LVS each	4 LVS	Other	90 h		
Total classroom time	**12 LVS**	**Total workload**			**360 h**

Optional extra

Other: Completion of the object work following consultation

Literature

is listed in Stud.IP

Allocation to course of study	Module name	Course code	Internal	Last updated
Bachelor's Degree in Conservation and Restoration	**Individual Profile Studies: HAWK plus**	**BK6-8**	WP	4.2.2019
Study semester: 6th semester / Offered in SS:		Credit points: 3 CP		Semester week hours: 3 SWS
Allocation to study specialization: All	Responsible for module	Type of teaching, group size, if applicable		
Can also be credited to study program: -		Language of instruction: German		

Requirements according to examination regulations	Recommended prerequisites
Study/examination achievements/ examination types	**If applicable, weighting of the study/examination achievements**
- -	Confirmation of participation

Module objectives/desired learning outcomes:

This course is based on the guiding principle of making a comprehensive contribution to the development of students' competencies with regard to their ability to study, their professional skills, and their social skills.
- Initiation and promotion of interdisciplinary approaches in teaching and research
- Development and offer of interdisciplinary teaching and learning concepts
- Teaching and practicing of interdisciplinary competencies
- Addition of interdisciplinary content to the courses offered in the degree programs
- Provision of multiple qualifications and profile building for students

Contents:

The range of courses includes accreditable courses from the contexts "Entrepreneurial Thinking and Action", "Leadership", "Communication and Individual Competencies" "Social Responsibility with respect to Volunteer Work", "Specific Professionalization" and "Languages", which the students select within the study programs to earn 6 credit points. Of course, the courses are evaluated to ensure the teaching quality. The range of courses offered is compiled each semester according to student needs and demands in the degree programs.
The courses aim at the integrative teaching of professional, methodological, social and personal competencies and place equal emphasis on both academic and practical perspectives. In the Individual Profile Studies, modern teaching and learning formats are provided to complement the conventional lecture, seminar and project courses of the degree programs and expand them in terms of content and methodology across the different disciplines.
As a result, the Individual Profile Study Program enables students to develop their own individual profiles based on their interests and inclinations.

Course attendance time (in mandatory hours - LVS)		**Workload** (in hours)			
N.N., from HAWK plus	3 LVS	Course attendance time		Home study	
	-	Lecture	30 h	Course accompanying and exam preparation	45 h
	-	Exercise	15 h		
	-	Other			
Total classroom time	**3 LVS**	**Total workload**			**90 h**

Optional extra

Literature
is listed in Stud.IP

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