

Chapter Four

Modules' Layouts and Assessments

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Isabelle McGinn wrote the modules' purposes, outcomes and content which is included in the THC study guide, and handed out to each student at the start of their two year degree. Students are made aware of what they need to achieve within each module and how each module fits into the bigger picture curriculum.

Modules Layouts

Year one

THC 801: Conservation Principles and Strategies

Purpose of the module

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Although the course is focused on the conservation of tangible forms of heritage, it has become increasingly obvious that the intangible values that we as people ascribe to heritage cannot be dissociated from the material. This has caused a shift in conservation theory and practice over the last few decades, from the conservation of materiality to the conservation of value and belief systems and a new role in the careful management of change. This general introductory module looks at understanding the significance, value and use of cultural heritage, how these changes around the world and calls for universality are highly problematic, and how communities engage with collections and the impetus to safeguard them. Furthermore, the module looks at the roles and responsibilities of custodians, conservators and curators in the conservation decision-making process and the practical, professional and ethical issues related to conservation within relevant ethical and philosophical frameworks with reference to local and African indigenous practices and belief systems, as well as relevant legislative frameworks (legislation, conventions and charters of conservation).

The module also examines the nature and history of the care of cultural elements and of conservation, including traditional methods of maintenance

and repair of cultural materials, and provides an understanding of the use of contextual elements both before and after the conservation interventions.

Articulation with other modules in the programme

THC 801 is an introductory module which grounds the students in the concepts of heritage and the evolution of heritage and conservation, laying the basis for understanding the challenges involved in conserving heritage in different social, economic and political environments, as well as instilling the requirements for ethical conduct and the role and responsibility of conservators in the preservation of heritage.

Module outcomes

At the end of the THC 801 module, students are expected to:

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- define heritage in its broader context locally and globally and discuss its changing roles in reflecting but also shaping contemporary society;
- define conservation and describe its importance to cultural heritage institutions;
- understand the role and responsibility of heritage custodians and conservators, in particular, in promoting the longevity of heritage according to ethical and legislative guidelines;
- understand the ethics and philosophy of conservation and how these have changed over time and are influenced by past, current and future use of heritage;
- understand that the preservation and conservation of heritage is influenced by environmental, social, cultural, ethical, economic and political climates and events and that these change over time; and
- argue and advocate for the preservation of heritage within the ethical and legislative frameworks.

Module content

- Introduction to conservation: What is conservation? Role of the conservator

- THC introduction: What is heritage, and what is cultural significance?
- Introduction to South African art history
- Introduction to South African history
- The relationship between collections management, curation and conservation
- Development of conservation
- Roles and responsibilities of custodians
- Ethical/philosophical frameworks
- Competencies of conservators & code of ethics
- Heritage legal frameworks—international and RSA
- How conservation affects interpretation and research
- Working with contested heritage

THC 802: Science Fundamentals for Conservation

Purpose of the module

This introductory chemistry module is specifically tailored to enable students with no previous science background to gain a greater insight into the chemical processes present in the practices and techniques used in conservation. Module content focuses on major conservation issues, including material types, environment, cleaning and deterioration.

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Articulation with other modules in the programme

THC 802 is an introductory module which grounds the students in the concepts of chemistry and material science, laying the basis for understanding heritage objects and their base materials, but also the diversity of materials, tools and techniques available to the conservator for the treatment of heritage objects as outlined in THC 804. This allows a deeper understanding of action and consequences and how materials have degraded and changed over time, as explained in THC 804, but also how heritage objects, once treated, will change, act and react in future as students enter their specialist module.

Module outcomes

At the end of this unit, students will be expected to have gained a working familiarity with basic scientific concepts and how these affect the behaviour of materials, objects, treatments and research potential of objects over time.

Module content

- Introduction to chemistry / Why do conservators need chemistry?
- Laboratory health & safety
- Introduction to the lab & practical setup
- Principles of matter & materials
- Atoms, molecules & ions
- Periodic table of the elements
- Atomic structure & chemical bonding
- Reactions & chemical equations
- Phase transformations
- Liquids & solutions
- Interpreting the tea's solubility chart
- Functional groups
- Mineral chemistry
- Hazards & awareness
- Projects

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THC 803: Research methods and methodology in conservation

Purpose of the module

This module focuses on the research involved in conservation, aspects of collections-based research including documentation of artefacts, photography, the preparation of research projects, writing project proposals and academic writing for publication. This module has both theoretical and practical components where students will examine, document and carry out analyses on a variety of museum objects.

Articulation with other modules in the programme

THC 803 exposes the students to research in the field of conservation, looking at research methods, tools & equipment and what information they can provide on a particular material or the construction of an object, as well as how to approach research design and research methodology in conservation.

Module outcomes

At the end of this unit, students will be expected to have gained a working familiarity with basic scientific concepts and how these affect the behaviour of materials, objects, treatments and research potential of objects over time.

Module content

- Objects/collections-based research
- Practical assignments/research project with selected objects
- Documentation of selected objects
- Condition assessments
- Discussion & formulation of research questions, the analytical approach
- Writing a research proposal
- Refining a research proposal
- Object documentation
- Imaging techniques: UV-Vis-IR photography
- Principles of experimental design, destructive vs. non-destructive analysis
- Sampling & sample handling
- Hazard awareness
- Imaging techniques: X-rays
- Microscopy: Polarised light, stereo, confocal, scanning electron microscopy
- X-ray techniques: XRF, XRD, PIXE, SEM-EDS, synchrotron radiation
- X-ray techniques: FTIR, micro-Raman, UV-Vis and near-infrared absorption, reflectance and fluorescence, as well as laser-based techniques
- Chromatography: Thin layer & liquid chromatography
- Magnetic resonance microscopy
- Data handling & interpretation

- Advanced techniques (self-study & presentation)

THC 804: Materials, mechanisms of decay & stabilisation of artefacts.

Purpose of the module

THC 804 introduces students to the wide range of materials and objects to be found in heritage repositories. The unit is collections-based, and after a broad exposure, students will be assisted in the identification of a specialist area and supervisor for the ensuing research component, which includes the collections-based practicals/research and mini-dissertation.

This module has both theoretical and practical components where students will learn to differentiate between material types, isolate different component parts of composite objects, and learn about the technology used in fabrication. Students are immersed in the conservation process, looking at handling, exhibition and storage guidelines of each material type, identifying possible causes of deterioration and damage, minimising such damage through the construction of appropriate mounts and enclosures, and responding to damage by stabilising the artefact through basic remedial treatments.

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Articulation with other modules in the programme

Drawing on the principles of chemistry and materials science explored in THC802, and how to look beyond the visual surface aspects of objects, THC 804 exposes the students to the great variety of materials used in the manufacture of heritage objects.

Module outcomes

At the end of this unit, students will be expected to have gained a working familiarity with a variety of organic and inorganic materials encountered in heritage collections and objects, as well as being able to document such objects, apply preventive conservation guidelines and provide recommendations for appropriate handling, storage, transport and exhibition of these materials. Additionally, students are expected to be able to carry out basic surface cleaning treatments appropriate for these materials as the first step towards remedial action.

Module content

- Preventive conservation (handling, storage, transport and display)
- Surface cleaning
- Archaeological collections
- Clay, adobe and low-fired ceramics
- Glazed ceramics
- Porcelain and glass
- Plaster, gesso and lime
- Stone
- Metals
- Leather, skin & hide
- Horn, tooth & shell
- Quills and feathers
- Hair, wool and natural textiles
- Wood bark and grass
- Paper
- Books
- Photographs
- Natural history specimens
- Contaminated collections

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THC 806: Conservation: Paper & archival collections

Purpose of the module

The introductory principles of remedial conservation will be explored within the specialisation of paper and archival collections, from treatment options and evaluation to the final decision-making processes for appropriate treatment options for cleaning, stabilisation and conservation of artefacts. Paper and archival collections include artefacts on paper-based substrates including manuscripts, sheet music, maps, architectural and technical drawings, archival records, books, and ephemera such as flyers, posters, advertising and photographs. The complexity of treating this group of artefacts lies in their layered structure where different materials can act in conflict with one another.

Articulation with other modules in the programme

Drawing on the principles of chemistry and materials science explored in THC802, and how to look beyond visual surface aspects of objects, THC 806 exposes the students to the great variety of materials used in the manufacture of heritage objects.

Module outcomes

Upon completion of this unit, students should be able to attend to the assessment and documentation of paper-based objects unsupervised, correctly identifying materials, correctly identifying damage and its causes, and proposing appropriate preventive conservation guidelines.

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Module content

- History of books, manuscripts and paper in the African context
- Paper manufacture & identification
- The development of the codex in Africa
- Islamic manuscript tradition in Africa
- European missionary activity
- Colonial administration and occupation (1662–1910)
- Types of paper & identification
- Identification of decorative papers & the techniques of their manufacture
- Identification of media on paper (drawing, print & photograph)
- Deterioration & damage affecting paper

- Preventive conservation strategies for paper-based materials
- Investigative tools & techniques
- Testing paper for acidity, lignin & solubility
- Treatment planning & development
- Documentation of paper-based objects
- Dry surface-cleaning treatments
- Humidification
- Washing
- Deacidification
- Stain reduction & removal
- Drying & flattening after aqueous treatment
- Pressure-sensitive tape removal
- Removal of auxiliary support
- Resizing after chemical treatment
- Tear mending
- Infilling of losses
- Retouching

THC 807: Conservation: Polychrome surfaces

Purpose of the module

The introductory principles of remedial conservation will be explored within the specialisation of polychrome surfaces, from treatment options and evaluation to final decision-making processes for appropriate treatment options for cleaning, stabilisation and conservation of artefacts. Polychrome surfaces include any substrate to which a decorative layer has been applied. They include paper, canvas, cloth, board, wood and metal substrates with applied preparatory layers of ground, paint, varnishes and/or lacquers. The complexity of treating this group of artefacts lies in their layered structure where different materials can act in conflict with one another.

Articulation with other modules in the programme

Drawing on the principles of chemistry and materials science explored in

THC802 and how to look beyond visual surface aspects of objects, as covered in THC 804, in THC 806, the students are exposed to the details of polychrome objects in specific.

Module outcomes

Upon completion of this unit, students should be able to attend to the assessment and documentation of polychrome objects unsupervised, correctly identifying damage and its causes and proposing appropriate preventive conservation guidelines.

Although the time allotted for practice is largely insufficient to instil the breadth of knowledge needed to be fluent in all conservation treatment options and their consequences, students are expected to understand the materials well enough to propose initial basic treatments for remedial action and to be aware of their limitations. Developing a trained eye and hand takes years of practice and confrontation with multiple scenarios, and practice will have to extend beyond this module.

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Module content

- Assessment and documentation of polychrome objects
- Supports (rigid, canvas and auxiliary)
- Ground and underdrawings
- Pigment and paint materials
- Consolidation and facing
- Surface cleaning
- Removal of patches, stickers and old linings
- Deformations and planar distortions
- Solvent cleaning
- Lining and strip lining techniques
- Restretching
- Retouching
- Varnishing

THC 808: Conservation: Archaeological collections

Purpose of the module

The introductory principles of remedial conservation will be explored within the specialisation of archaeological collections, from treatment options and evaluation to final decision-making processes for appropriate treatment options for cleaning, stabilisation and conservation of artefacts.

Module outcomes

Upon completion of this unit, students should be able to attend to the assessment and documentation of archaeological objects unsupervised, correctly identifying damage and its causes and proposing appropriate preventive conservation guidelines.

Although the time allotted for practice is largely insufficient to instil the breadth of knowledge needed to be fluent in all conservation treatment options and their consequences, students are expected to understand the materials well enough to propose initial basic treatments for remedial action and to be aware of their limitations. Developing a trained eye and hand takes years of practice and confrontation with multiple scenarios, and practice will have to extend beyond this module.

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Module content

- Definition of archaeological conservation
- Archaeological conservation ethics
- Processes of archaeological conservation (that is, pre-excavation considerations, on-site conservation, laboratory conservation and long-term conservation of artefacts)
- Fieldwork: Conservation guidelines, rescue conservation
- Agents of decay in archaeological environments (for example, water, oxygen, acidity, alkalinity, salts, temperatures, organisms, etc.)
- Conditions in archaeological environments (for example, absence of oxygen, absence of water, presence of water, salts and other residues, etc.)

- Understanding the condition of archaeological artefacts affected by several factors (namely, prior use, burial conditions, excavation, recovery methods, analysis and curation)
- Identification of archaeological materials: bone and ivory, leather, wood, shell, glass, ceramics, copper, iron, gold, lead, silver, tin, alloys
- Archaeological techniques of preservation
- Retrieval of artefacts from deposits (including animal and human remains)
- Lifting, moulding in situ, including conditions of burials
- Marking and labelling artefacts of different materials
- Post-excavation assessments
- Examination and cleaning
- Introduction to archaeological conservation documentation and photographic recording
- Condition assessments
- Investigative cleaning, microscopy and chemical analysis
- Preventive packaging
- Stabilisation
- Description, physical characterisation, chemical characterisation and structural characterisation of materials
- Interventive conservation: This involves examination, cleaning, stabilisation, repair and restoration. In archaeological conservation, this is the last resort and, in most cases, should be reversible.
- Desalination
- Consolidation
- Adhesion
- Gap filling
- Permits and permit applications
- Dealing with human remains
- Chemical analysis, visible light, infrared, ultraviolet, radiography

Year two

THC 805: Collections-based practice (internship)

Purpose of the module

Practice forms an integral part of interventive conservation and entails applying theoretical knowledge on treatment evaluation and development, decision-making and honing bench skills. This is a compulsory module in year 2 of the master's programme. The focus should be on interventive/remedial conservation training in the field of specialisation. This may also apply to general preventive conservation practice or heritage management with a strong conservation focus, as it is recognised that not all students desire to be interventive conservators and some may be more theoretically oriented. Training is carried out under supervision within a museum collection or in private practice with an approved conservator-restorer and contains the practical component of the mini-dissertation.

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Articulation with other modules in the programme

THC 805 draws on the knowledge and skills gained in all the year-1 modules: THC 801, THC 802, THC 803, THC 804 and THC 807.

Module outcomes

At the end of this unit, students will be expected to have gained a deeper sense of confidence in what they have learnt and be able to apply them in dealing with the preventive conservation of a variety of materials, but also, more specifically, in attending to the various needs of polychrome surfaces, including assessment and documentation, handling, and a variety of techniques for the stabilisation and remedial treatment of polychrome surfaces. Students focusing on remedial conservation are expected to be able to carry out basic surface cleaning treatments appropriate for these materials as the first step towards remedial action.

Students working in an allied field or on more theoretical projects will still be expected to show conservation projects that they have undertaken. In addition

to regular reports, a portfolio of work carried out will be submitted and signed off by the course coordinator.

Module content

The content and focus of your internship will be discussed during a meeting between the course manager and the relevant institutional supervisor or practitioner and will depend on the institution/practitioner's requirements.

THC 800: Mini-dissertation

Students are to submit a mini-dissertation of 20 000–30 000 words on an approved conservation-based topic.

Module Assessment Layout

These assessment layouts are flexible for each year depending on the guest lecturers and available materials. These tables are reflective of 2020 and 2021.

Module	Assignments	Deadline	Relative %
HC 801: Conservation Principles & Strategies			
	Biographical object		15
	Class Quiz 1 - Damage ID		10
	Presentation - Preventive Conservation Frameworks		50
	Class Quiz 2 - Handling		10
	External Mark		15
Total Module Mark			100
THC 802: Science Fundamentals for Conservation			
18 Credits			
Class Assignments			
	Safety Quiz		n/a
	Quiz 1		5
	Periodic Table of Elements		5
	Quiz 2		5
	States of Matter		n/a
	Lewis Structure Worksheet		n/a
	Exothermic Endothermic Worksheet		n/a
	Redox Number Worksheet		n/a
	Redox Reactions		n/a
Module	Assignments	Deadline	Relative %
Essay	Nature of Matter in the Context of Conservation? Essay		20

Presentations	Present Pigments in Terms of Composition, Uses, Problems etc.		5
	External Mark		
Total Module Mark			100
THC 803: Research Methodology in Conservation			
	Mindmap of Project		10
	Poster on Analytical Techniques		45
	External Mark		45
Total Module Mark			100
THC 804: Materials, Mechanisms of Decay & Stabilization of Artefacts			
25%			
Practicals			
Class Assignments	Surface Cleaning Homework (35 pts)		15
	Cleaning Practical (5pts)		10
	Stone (5pts)		10
	Textiles (30pts)		30
	Furniture (100pts)		35
Subtotal			100
25%			
Metal Conservation			
Class Assignments	Metal 1: Identification (50pts)		20
Module	Assignments	Deadline	Relative %
	Metal 2: (50pts)		10

	Metal 3: (50pts)		20
	Metal 4: (50pts)		20
	Metals Week Paper (100pts)		30
Subtotal			100
25%			
Organics	Organic Chemistry (150pts)		25
	Organics 1 (30pts)		15
	Organics 2 (30pts)		15
	Organics 3 Chicken Bones (150pts)		25
	Ivory, Bone, Antler and Horn Test (100pts)		20
Subtotal			100
25%			
Ceramics	Labelling & Numbering (10pts)		10
	Porosity (5pts)		5
	Manufacture (5pts)		5
	B&W Consolidation and Adhesion (35pts)		25
	Porcelain Restoration (60pts)		55
Subtotal			100
Total Module Mark			100

