



MODULE: INTRODUCTION TO METALS CONSERVATION (BLENDED LEARNING MODE)

MC04PGD (8 Credits)

**Recommended duration for completion:
3 WEEKS Theory (distance learning) + 1 WEEK Resident, Practical Contact session**

THE SOUTH AFRICAN INSTITUTE FOR HERITAGE SCIENCE & CONSERVATION

Provisionally registered with the Department of Higher Education and Training as a private higher education institution under the Act.

Registration certificate No. 2018/HE07/007 - valid until 31/12/2022

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INTRODUCTION TO METALS CONSERVATION

Enrollment category: Special Student (*retaining potential for transition to programme standing, and graduation*)
8-credit module

Content & Themes

Video tutorials, guidance & mentorship, demonstrations and practical sessions:

- Material characterisation, damage and condition assessment, and proposed treatment options
- Remedial interventive treatments:
 - metal cleaning, employing physical and chemical processes and a range of equipment on selected sample material.
 - disassembly, re-shaping & annealing by means of hammer-work, snarling irons and supports for the reshaping and correction of deformed metals.
 - replication of missing material with metal sections as well as polymer substitutes.
 - mechanical, polymer and hot work adhesion of replicated sections, including working down and visual integration of the material.
 - mould making for white metal casting and casting materials.
 - pen-plating, cold patination, cold & hot waxing and lacquer coats.
 - workshop contamination
- Treatment specifications and COSHH sheets.

Module Purpose

The module, *Introduction to Metals Conservation*, is designed to provide students with the foundational skills and ethical background required for the analysis and treatment of damaged metal artefacts. These skills will equip the student with the capacity to identify causes of damage and deterioration as well as sufficient knowledge to identify metals, metal alloys and metal finishes. The students will receive instruction regarding ideal environments for storage and display in order to prevent or delay deterioration of intact as well as fragile material. These attainments are required to aid treatment decisions and implementation as well as recommendations regarding the storage, display and handling of the material.

Demonstrations and practical sessions will provide the necessary training in interventive practices. Students will learn how to employ tools, materials and equipment safely as well as receive instruction in the safe disposal of hazardous materials.

Further to the treatment of damaged and/or fragile metal artefacts, the students will acquire skills in the compilation of instructive and helpful reports which record the results of trials, analysis and specify treatment. Additional information regarding storage environments, handling, display, health and safety is also to be included in the report.

The module(s) specifically linked to this subject are *Conservation Theory & Skills* and *Advanced Metals Conservation*.

Learning Outcomes

On completion of this module, the student should be able to:

1. have a firm understanding of the Code of Ethics and be able to perform all conservation interventions in accordance with this code.
2. select, execute and record the results of the appropriate chemical tests with which metal, metal alloys and finishes are characterised.
3. identify, through physical examination, types of damage and causes of deterioration, employing the appropriate tools, equipment and instruments.
4. intelligibly document and record all findings and proposed treatment in order to produce an instructive and comprehensive, illustrated condition and treatment specification.
5. be informed and compliant of health & safety requirements of tools and materials employed.

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PRESCRIBED MODULE STUDY MATERIAL (provided):

Selwyn, L. (2004) *Metals and Corrosion. A Handbook for the Conservation Professional*. Minister of Public Works and Government Services: Canada.

RECOMMENDED READING:

- Elements of Archaeological Conservation by J.M. Cronyn.
- Ancient & Historic Metals. Conservation and Scientific Research by D.A. Scott, J Podany, B.B. Considine (Eds).
- Copper and Bronze in Art. Corrosion, Colorants, Conservation by D.A. Scott
- The Colouring, Bronzing and Patination of Metals by R Hughes and M Rowe.
- The Complete Metalsmith. An Illustrated Handbook by T. McCreight
- Practical Casting. A Studio Reference by T. McCreight.
- The Artistic Crafts Series of Technical handbooks. Silverwork and Jewellery by H. Wilson.
- Metalwork for Craftsmen by H.H. Hart and G Keeley.

TEACHING & LEARNING METHODS:

On-line: Synchronous online video conference meetings shall feature, during which lectures and tutorials shall be presented, resulting in interaction between tutors and student. Ongoing direction and instruction shall follow, requiring reading, self-study and assignments to be submitted. The formative coursework shall account for 40% of the total mark.

Contact block session: Presented on-campus at the Institute's conservation laboratory, these sessions shall provide for practical execution and implementation of all remedial, interventive treatments emerging from the theoretical content.

A final summative assessment shall conclude this *Introduction to Metals Conservation* module. The summative coursework shall account for 60% of the total mark.

The pass mark for Introduction to Metals Conservation is 55%

In the case of candidates meeting the enrolment prerequisites for the Postgraduate Diploma "*Technical Conservation Studies*", credits achieved upon completion of Introduction to Metals Conservation may, upon application, successfully transfer towards attainment of a future graduation.

COURSE DETAILS

Enrolment prerequisites:

- Chemistry, at least on 1st year level OR an approved Chemistry bridging course, successfully completed (e.g. "*Bridging to Chemistry for Conservation*")
- Successful registration for the following module: Conservation Theory & Skills (CTS01PGD)

Module cost:

USD 1,075.00

Certificate of attainment & scored Course Report follow completion.

(International logistics permitting, both digital and hard copy versions are typically furnished)