



MODULE: METALS CONSERVATION - Advanced Level (BLENDED LEARNING MODE)

AMC10PGD (16 Credits)

Course duration: 8 weeks
Mode of presentation: blended learning



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

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Content & Themes

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

- Damage & Condition Analysis of a suitably complex conservation project, incorporating at least one, non-metal component;
- Investigative Cleaning & Microscopy;
- Cleaning outside of manual techniques, including - Ultrasonic Cleaning, Steam, Abrasive – in combination with Organic Solvents;
- Electro-Polishing of Non-Ferrous Metals;
- Dent Removal – with specific emphasis on the conceptualization and shaping of custom-designed Tools and Formers;
- The Lathe – Methodology as related to Precision Machining;
- Mould Making – Pattern Preparation, Casting and Fettling;
- Finishing – Patination, Hot & Cold Waxing, Lacquer Finishes, Polymer Fills and Gilding;
- Electroplating & Electroforming;
- Treatment of Associated Materials (timber; horn; ivory; leather; textiles)

Module Purpose

This module builds on the instruction provided in the Metals Conservation (Foundational Level) module, and augments the level of both practical execution and theoretical scope. As such, it is designed to assist and inform the investigation and remedial treatment of metal objects and their associated materials which exhibit or feature advanced and complex damage & deterioration. Through lectures, instruction, demonstration and practical sessions, the student will be sufficiently informed to prescribe and execute various treatment techniques on metals and their associated materials to an ethically defensible standard.

Scientific and chemical analysis and investigation of both the material and its deterioration will be incorporated to a sufficient degree to allow students to effectively prescribe interventive methods, drawing on an optimally wide range of treatment methodologies and compendium of conservation materials - thereby maximizing the potential net gain of the required intervention.

The student will be instructed to a sufficiency of depth in the compilation of instructive, informative and aesthetically pleasing documentation in order to produce a comprehensive report in support of the conservation treatment performed during the module presentation - also outlining material interpretation through trials and analysis. Furthermore, the student will be guided in the initial decision-making processes with a view to the research project (dissertation subject, if applicable) which may follow upon completion of the requisite modules.

Preceding modules linked specifically to this subject are *Metals Conservation (Foundational Level)*, *Conservation Theory & Skills*, and the *Physics & Chemistry* module.

Learning Outcomes

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

1. devise comprehensive and ethical conservation strategies, of both an interventive and preventive nature, employing critical thinking, trials & analysis;
2. execute advanced remedial treatment procedures required to conserve metals, their alloys and associated materials without causing physical or aesthetic damage, or obscuring/removing historically significant information, and do so on an object of suitable complexity;
3. employ the results of the analysis garnered from the site survey and laboratory based analysis, to direct treatment and maintenance procedures, maximize the material conservation within the ethical boundaries by enhancing material stabilization, performing remedial interventions which promote material performance and enhance usefulness;
4. produce an instructive and comprehensive, illustrated condition and treatment report, which also prescribes preventive conservation measures;
5. observe and implement workshop safety measures.



RECOMMENDED READING:

- Cronyn: Elements of Archaeological conservation
- Horie: Materials for conservation: Organic consolidants, adhesives and coatings.
- Scott, Podeny & Considine: Ancient & historic metals. Conservation and scientific research.
- Scott: Copper & bronze in Art. Corrosion, Colorants, Conservation
- Selwyn: Metals and corrosion. A handbook for the conservation professional.
- Amenn: Casting brass
- Sparey: The amateur's lathe
- Kronquist: Metalwork for Craftsmen
- Veres Code of Ethics 2010
<http://cool.conservation-us.org/byorg/veres/veresethh.html>

TEACHING & LEARNING METHODS:

Remote (6 weeks): Synchronous, online video conference meetings feature, during which lectures and tutorial feedback are 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 (2 weeks / 9 days): Presented on-campus at the Institute's conservation laboratory and workshops. These hands-on, practical sessions teach technical hands skills and provide for practical execution and implementation of theoretical content.

A final summative assessment shall conclude this Metals Conservation advanced level module. The summative coursework shall account for 60% of the total mark. The pass mark for Metals Conservation advanced level is 55%.

In the case of candidates already meeting the enrolment prerequisites for the Postgraduate Diploma "Technical Conservation Studies", credits achieved upon completion of Advanced 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.
- Completion of the following modules: "Conservation Theory & Skills"; "Metals Conservation - Foundational Level"; Also: "Physics & Chemistry" OR accomplishment in some specialism of remedial conservation.

Tuition fee:

R19 841.52 (VAT exempt)

Registration fee:

R 325.00 (incl.)

Tuition Tool-kit:

R 770.00 (incl.)

Duration:

Eight weeks (sum of distance & contact sessions)

Prescribed textbooks:

V. Costa: *Modern Metals in Cultural Heritage*

A progress report will follow upon completion.