

EUColComp

Testing a European Competency Framework for VET in Collections Management

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PRODUCT TITLE

A COMPETENCY BASED CURRICULUM FOR NATURAL HISTORY COLLECTIONS MANAGEMENT

Date	August 28, 2015
Work package	WP2
Task	Task 2.3 Match existing training provision to competency framework and assign competencies to existing courses and identify gaps Task 2.4 Draw up education and development curriculum for natural history collections management Task 2.6 Identify learning mechanisms to address competency needs
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Competency Based Curriculum (CBC)

A Competency Based Curriculum is a framework or a guide for the detailed development of competencies, associated methodologies, learning resources and assessment.

The Competency Based Curriculum for collections care and management is based on the competencies defined in the Collections Management Competency Framework.

The Competency Based Curriculum specifies the learning outcomes which are linked to the competencies and are consistent with the job requirements as defined in the agreed Competency Framework. Each learning resource is linked to one or more competencies of the Collections Management Competency Framework and each competency can be linked to one or more potential learning resources. The ID number of the competency is identical to the ID number of the learning resource, facilitating the search for identified learning needs.

The components of the Competency Based Curriculum are:

- learning outcomes: induction and advanced learning,
- learning module unit,
- learning module elements,
- learning resources,
- methodologies,
- assessment.

Each module unit is linked to the units of competency of the Collections Management Competency Framework:
7 divisions of the Competency Based Curriculum are distinguished – *cfr.* annex p. 128 of this document.

The Collections Management Competency Framework document can be found at:

<http://eucomp.myspecies.info/content/nhm-consolidated-competency-framework-v4-en>

Competency Based Curriculum

Unit of Competency	1. Collections Management, Conservation and Care 1.1 Collections Growth & Development	
Module title	MODULE 1.1 UNDERSTANDING COLLECTIONS GROWTH & DEVELOPMENT	
Purpose statement	The purpose of this module is to provide competency based learning in Collections Strategy.	
Module descriptor	This module covers the knowledge, skills and attitude required to understand the collection responsible for, to work towards development of the collection and to contribute to the wider Collections Strategy.	
Level Induction learning	Module elements: 1101 Collections Development Strategy: Assessment 1102 Collections Development Strategy: Development 1103 Growth of the Collections 1104 Fieldwork: Planning and Organization 1105 Fieldwork: Practical Experience 1106 Auctions, Trade Shows and Specialist Fairs	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job On-line resources	
Recommended	Written examination Practical exercise	

assessment method learners	Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1101A</p> <p>Become familiar with collection within designated Area of Responsibility.</p> <p>Begin to understand the strengths and weaknesses of collection within designated Area of Responsibility.</p>	<p>1101B</p> <p>Demonstrate an understanding of the strengths and weaknesses of the collection, e.g. what people want/need; keeping up to date; knowing the gaps etc.</p>
	<p>1102A</p> <p>Provide data e.g. from collections surveys to inform collection development strategy, under direction.</p>	<p>1102B</p> <p>Identify areas suitable for development such as gaps or limited coverage.</p> <p>1102B (=1101B)</p>
	<p>1103A</p> <p>Suggest possible new items for addition to the collection.</p>	<p>1103B</p> <p>Evaluate the importance of new specimens to the collection.</p> <p>Facilitate donations and acquisitions, e.g. by interacting with amateur collectors.</p>
	<p>1104A</p> <p>Collect information and/or equipment under guidance to support field programmes.</p> <p>Assist fieldwork as part of supervised project or programme.</p>	<p>1104B</p> <p>Identify opportunities for collecting/fieldwork. Make recommendations on what to collect and where.</p> <p>Organise their own fieldwork as part of supervised project or programme.</p>

	<p>1105A Learn relevant basic field collecting techniques and participate in directed fieldwork.</p>	<p>1105B Carry out independent and group fieldwork.</p>
	<p>1106A Attend shows under direction or independently.</p>	<p>1106B Attend shows, assess material and make recommendations to acquire specimens. Build working relationship with community (e.g. professional and amateur palaeontologists and collectors) and specialists.</p>
<p>Level Advanced learning</p>	<p>Module elements:</p> <p>1101 Collections Development Strategy: Assessment 1102 Collections Development Strategy: Development 1103 Growth of the Collections 1104 Fieldwork: Planning and Organization 1105 Fieldwork: Practical Experience 1106 Auctions, Trade Shows and Specialist Fairs</p>	<p>Duration: see course descriptions below</p>
<p>Methodologies</p>	<p>Lectures Discussion groups Workshop On-the-job On-line resources</p>	
<p>Recommended assessment method learners</p>	<p>Written examination Practical exercise Interview</p>	
<p>Assessment method for course quality</p>	<p>Feedback from learners via feedback form</p>	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1101C</p> <p>Establish criteria to help determine strengths and weaknesses of all collections within Area of Responsibility.</p> <p>Use international and national best practise for determining the strengths and weaknesses of the Area of Responsibility.</p>	<p>1101D</p> <p>Establish criteria for assessment of strengths and weaknesses collections care and holdings.</p> <p>Use international and national best practise to determine the strengths and weaknesses of a large collection unit such as a department and relates it to the Museum and external collections.</p>
	<p>1102C</p> <p>Implement collection development strategy with specialist input from team.</p> <p>Contribute to collections development strategy by providing specialist input.</p>	<p>1102D</p> <p>Develop collection development strategy for the relevant Area of Responsibility.</p> <p>Contribute to Museum strategy and policy on collections strategy and development.</p>
	<p>1103C</p> <p>Identify, assess and develop important opportunities to enhance all collections within Area of Responsibility, e.g. exchanges with other institutes.</p> <p>Liaise with research staff about acquisition of new collections.</p> <p>Seek and negotiate donations, purchases and bequests as opportunities occur.</p> <p>Identify opportunities for dispersal, disposal or de-accessioning and make recommendations to Senior Staff.</p> <p>Calculate the growth and estimate storage space needed.</p>	<p>1103D</p> <p>Identify, assess and develop important opportunities to enhance relevant Area of Responsibility.</p> <p>Negotiate for resources to purchase and / or incorporate incoming collections into the relevant Area of Responsibility.</p> <p>Decide on disposals and make recommendations to Senior Staff as appropriate.</p>

	<p>1104C</p> <p>Organise and lead fieldwork programmes/projects to enhance relevant collections within Area of Responsibility supported by internal and/or external funding.</p> <p>Take control of planning/organisation of necessary documentation for fieldwork, e.g. safety certificates, permits, visas.</p>	<p>1104D</p> <p>Develop proposals and secure resources to carry out field programmes/projects to enhance collections in Area of Responsibility.</p> <p>Coordinate fieldwork that might be in common between two units/departments etc.</p>
	<p>1105C</p> <p>Contribute recognised practical skill set or specific experience to cross-departmental or multi-institutional field programmes.</p>	<p>1105D</p> <p>Initiate and lead departmental, large, multi-disciplinary field programmes.</p>
	<p>1106C</p> <p>Decide on acquisition of material and negotiate to acquire within allotted budget.</p>	<p>1106D</p> <p>Seek budget for acquisition at show. Plan annual programme for attending trade shows.</p>

LEARNING MODULE ELEMENTS

<p>Collections Development Strategy: Assessment</p> <p>Collections Development Strategy: Development</p> <p>Growth of the Collections</p> <p>1101AB 1102AB 1103AB</p> <p>1101CD 1102CD 1103CD</p>	<p>Title: Collection Management</p> <p>Organising institution(s)/organisation(s): Natural History Museum, Florence University</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 4 days</p> <p>URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
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<p>Collections Development Strategy: Assessment</p> <p>Collections Development Strategy: Development</p> <p>Growth of the Collections</p> <p>1101AB 1102AB 1103AB</p> <p>1101CD 1102CD 1103CD</p>	<p>Title: Collections Skills Seminars</p> <p>Organising institution(s)/organisation(s): Collections Trust</p> <p>Language: English</p> <p>Content: Cultural Heritage & Natural History</p> <p>Level training: non-academic</p> <p>Target audience: designed for those working in small and medium-sized English museums that are accredited or that are working towards accreditation</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 1 day</p> <p>URL: http://www.collectionslink.org.uk/skills-seminars-programme</p>
<p>Fieldwork: Planning and Organization</p> <p>Fieldwork: Practical Experience</p> <p>1104AB 1105AB</p> <p>1104CD 1105CD</p>	<p>Risk and emergency management training for fieldwork safety</p> <p>Organising institution(s)/organisation(s): Training Expertise Ltd</p> <p>Language: English</p> <p>Content: Field work safety, planning management</p> <p>Level training: non-academic</p> <p>Target audience: designed for teachers and staff involved in fieldwork</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis, on demand</p> <p>Duration: not mentioned</p> <p>URL : http://www.training-expertise.co.uk/courses/field-safety/risk-and-emergency-management/</p>
<p>Fieldwork: Planning and Organization</p> <p>Fieldwork: Practical Experience</p> <p>1104AB 1105AB</p> <p>1104CD 1105CD</p>	<p>Off-site Safety Management - RGS Accredited Field Safety Course</p> <p>Organising institution(s)/organisation(s): Training Expertise Ltd</p> <p>Language: English</p> <p>Content: Field work safety</p> <p>Level training: non-academic</p> <p>Target audience: designed for teachers and staff involved in fieldwork</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis, on demand</p> <p>Duration: 2 days</p> <p>URL : http://www.training-expertise.co.uk/courses/field-safety/fieldwork-and-travel-safety-courses/off-site-safety-management/</p>

<p>Fieldwork: Planning and Organization</p> <p>Fieldwork: Practical Experience</p> <p>1104AB 1105AB</p> <p>1104CD 1105CD</p>	<p>Expedition Training weekend</p> <p>Organising institution(s)/organisation(s): Training Expertise Ltd</p> <p>Language: English</p> <p>Content: logistics of organising and leading an expedition</p> <p>Level training: non-academic</p> <p>Target audience: designed for teachers and staff involved in fieldwork</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis, on demand</p> <p>Duration: 2 days</p> <p>URL : http://www.training-expertise.co.uk/courses/expedition-and-outdoor-skills/expedition-and-fieldwork-training/expedition-training-weekend/</p>
<p>Fieldwork: Planning and Organization</p> <p>Fieldwork: Practical Experience</p> <p>1104AB 1105AB</p> <p>1104CD 1105CD</p>	<p>On-line Expedition handbook of the Royal Geographical Society</p> <p>http://www.rgs.org/OurWork/Publications/EAC+publications/Expedition+Handbook/Expedition+Handbook.htm</p>
<p>Auctions, Trade Shows and Specialist Fairs</p> <p>1106AB</p> <p>1106CD</p>	<p>These skills, knowledge, and attitude are gained through work experience.</p>

Competency Based Curriculum

Unit of Competency	1. Collections Management, Conservation and Care 1.2 Collections Policies and Procedures	
Module title	MODULE 1.2 UNDERSTANDING COLLECTIONS POLICIES AND PROCEDURES	
Purpose statement	The purpose of this module is to provide competency based learning in collections policies and procedures.	
Module descriptor	This module covers the knowledge, skills and attitude required to understand collections policies and procedures, to develop policies and to contribute to developing the policy understanding of others.	
Level Induction learning	Module elements: 1201 Collection Policies and Procedures: General 1202 Collection Policies and Procedures: Due Diligence, ABS <i>etc.</i> 1203 Collection Policies and Procedures: Documentation	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job On-line resources	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method course quality	Feedback from learners via feedback form	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	1201A Follow collection management procedures.	1201B Be fully conversant with institution and departmental collections policies and procedures. Contribute improvements to procedures resulting from changing user demands and scientific developments that are incorporated into the formal written procedures (e.g. a Collections Manual).
	1202AB Keep up to date and comply with all national and international conventions and legislation in Area of Responsibility.	
	1203A Maintain and generate documentation for specimens or objects e.g. documentation relating to legal requirements of institution, loan documents etc	1203B Ensure compliance with policies (e.g. self, visitors, and volunteers). Suggest improvements to specimen documentation policies and procedures. E.g. loan documents etc.
Level Advanced learning	Module elements: 1201 Collection Policies and Procedures: General 1202 Collection Policies and Procedures: Due Diligence, ABS <i>etc.</i> 1203 Collection Policies and Procedures: Documentation	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshop On-the-job On-line resources	

Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method for course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1201C</p> <p>Manage the required systems for implementation of formal written procedures (e.g. a Collections Manual) and collections policies/ procedures in their team and/or Area of Responsibility.</p> <p>Periodically evaluate procedures to suggest changes/amendments.</p>	<p>1201D</p> <p>Establish procedures across the Area of Responsibility and Museum e.g. editor in chief of the formal written procedures (e.g. a Collections Manual). Review and revise Museum collections policies.</p> <p>Provide advice on collections policy issues to other institutions and museums.</p> <p>Ensure compliance with all collections policies and procedures across all users.</p>
	<p>1202C</p> <p>Ensure and monitor compliance with national and international conventions and legislation for team and/or Area of Responsibility.</p>	<p>1202D</p> <p>Contribute to development of policy and ensure procedures adhered to at departmental and institutional level are compliant at a national and international level.</p> <p>Ensure compliance with all collections policies and procedures across all users.</p>
	<p>1203C</p> <p>Ensure compliance with documentation policies and procedures for all collections within Area of Responsibility.</p>	<p>1203D</p> <p>Ensure policies have effective procedures to work within the Area of Responsibility.</p> <p>Develop new Museum policies.</p>

	Follow-up on loan documentation if necessary.	Contribute to national policies on documentation.
LEARNING MODULE ELEMENTS		
Collection Policies and Procedures: General Collection Policies and Procedures: Due Diligence, ABS etc. Collection Policies and Procedures: Documentation 1201AB 1202AB 1203AB 1201CD 1202CD 1203CD	Title: Access to collections Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum Budapest Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: lunch-to-lunch course URL: http://synthesys.cybertaxonomy.africamuseum.be/node/92	
Collection Policies and Procedures: General Collection Policies and Procedures: Due Diligence, ABS etc. Collection Policies and Procedures: Documentation 1201AB 1202AB 1203AB 1201CD 1202CD 1203CD	Title: Natural Science Collections Development Organising institution(s)/organisation(s): Welsh Museums Federation Language: English Content: Natural History focused (botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: curators Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 1 day URL: -	
Collection Policies and Procedures: General Collection Policies and Procedures: Due Diligence, ABS etc. Collection Policies and Procedures:	Title: Collection management Organising institution(s)/organisation(s): Hungarian Natural History Museum Language: Hungarian Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic	

<p>Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Target audience: technicians</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 5 weeks</p> <p>URL: -</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: Collection Management</p> <p>Organising institution(s)/organisation(s): Natural History Museum, Florence University</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 4 days</p> <p>URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: Behoud en beheer van collecties / Gestion des collections</p> <p>Organising institution(s)/organisation(s): Royal Belgian Institute of Natural Sciences</p> <p>Language: Dutch/French</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks and minerals, metal & paintings)</p> <p>Level training: non- academic</p> <p>Target audience: technicians, collections managers, curators</p> <p>Geographical range of audience: national, mainly in-house however also collection collaborators of other institutes were invited</p> <p>Periodicity: regularly organised until 2011, on demand</p> <p>Duration: 2-3 days depending on educational level of participants</p> <p>URL: -</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures:</p>	<p>Title: Collection management in Natural History Museum</p> <p>Organising institution(s)/organisation(s): Vyšší odborná škola informačních služeb</p> <p>Language: Czech</p> <p>Content: Natural History focused (general, botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals)</p> <p>Level training: academic (high school)</p> <p>Target audience: collections managers</p>

<p>Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Geographical range of audience: national</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 3 x 3 hours</p> <p>URL: -</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: Técnicas básicas de conservación y mantenimiento de collecciones de historia natural y materiales didácticos en ies con fondos históricos</p> <p>Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales</p> <p>Language: Spanish</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, graduates (MSc, PhD)</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 3 days</p> <p>URL: -</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: SYNTHESYS Course in Management, Conservation and Care of Natural History Collections</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid</p> <p>Language: English</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils)</p> <p>Level training: non-academic</p> <p>Target audience: undergraduates</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 1 week</p> <p>URL: -</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures:</p>	<p>Title: Collections Skills Seminars</p> <p>Organising institution(s)/organisation(s): Collections Trust</p> <p>Language: English</p> <p>Content: Cultural Heritage & Natural History</p> <p>Level training: non-academic</p> <p>Target audience: designed for those working in small and medium-sized English museums</p>

<p>Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>that are accredited or that are working towards accreditation</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 1 day</p> <p>URL: http://www.collectionslink.org.uk/skills-seminars-programme</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>1201AB 1202AB</p> <p>1201CD 1202CD</p>	<p>Title: Legal aspects of shipping biological specimens</p> <p>Organising institution(s)/organisation(s): Zoologische Staatssammlung München & Museum für Naturkunde Berlin</p> <p>Language: English or German</p> <p>Content: Natural History focused (general, zoological, botanical, fluid-preserved, dried, entomological, taxidermy & skins, molecular)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates</p> <p>Geographical range of audience: European and international</p> <p>Periodicity: on a regular basis and on demand</p> <p>Duration: 1 day</p> <p>URL: -</p>
<p>LEARNING ON SPECIFIC COLLECTIONS</p>	
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: Management of Archaeological Material</p> <p>Organising institution(s)/organisation(s): Bournemouth University</p> <p>Language: English</p> <p>Content: Cultural Heritage focused (archaeology)</p> <p>Level training: academic (Nautical Archaeological Society accredited short course)</p> <p>Target audience: undergraduates; or to non-graduates/ professionals with significant and relevant work experience</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 1 week</p> <p>URL: http://courses.bournemouth.ac.uk/courses/training-course/management-of-archaeological-material/short-course/4664/course_information-course_overview/</p>
<p>Collection Policies and Procedures:</p>	<p>Title: Curation of ethnobiology collections</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Royal Botanic Gardens, Kew</p>

<p>General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Language: English</p> <p>Content: Natural History focused (botanical, ethnobiology)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, postgraduates</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: lunch-to-lunch course</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/page/module_5_curation_ethnobiology_courses</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Title: Herbarium Management Training</p> <p>Organising institution(s)/organisation(s): Botanische Staatssammlung München</p> <p>Language: German/English</p> <p>Content: Natural History focused (botanical, dried, molecular)</p> <p>Level training: non-academic</p> <p>Target audience: starting with bachelor students</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 6-8 weeks</p> <p>URL: http://www.botanischestaatssammlung.de/general/training.html</p>
<p>ON-LINE LEARNING RESOURCES</p>	
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Collection Management Policies for Museums and Related Institutions On-line Course</p> <p>Organised on a regular basis by the Northern States Conservation Center</p> <p>http://www.collectioncare.org/collections-management-policies-museums-and-related-institutions-line-course</p>

<p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>1202AB</p> <p>1202CD</p>	<p>Legal Issues in Collection Management On-line Course Organised on a regular basis by the Northern States Conservation Center http://www.collectioncare.org/legal-issues-collection-management-line-course</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Policies for Managing Collections On-line Course Organised on a regular basis by Museum Study LCC http://www.museumstudy.com/courses/course-list/policies-for-managing-collections/</p>
<p>Collection Policies and Procedures: General</p> <p>Collection Policies and Procedures: Due Diligence, ABS etc.</p> <p>Collection Policies and Procedures: Documentation</p> <p>1201AB 1202AB 1203AB</p> <p>1201CD 1202CD 1203CD</p>	<p>Ethics, Laws and Collections management On-line Course Organised on a regular basis by Museum Study LCC http://www.museumstudy.com/courses/course-list/ethics-laws-collections-management/</p>

Competency Based Curriculum

Unit of Competency	1. Collections Management, Conservation and Care 1.3 Collections Organisation	
Module title	MODULE 1.3 UNDERSTANDING, PLANNING AND MANAGING COLLECTIONS ORGANISATION	
Purpose statement	The purpose of this module is to provide competency based learning in collections organisation.	
Module descriptor	This module covers the knowledge, skills and attitude required to organise collections responsible for and to decide on planning and physical management of the collection.	
Level Induction learning	Module elements: 1301 Underlying Basis for the Organisation 1302 Physical Organisation and Space Planning 1303 Collection Maintenance	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method course quality	Feedback from learners via feedback form	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	1301A Acquire knowledge of the organisation of the collections and the underlying logic. E.g. navigate the collections to retrieve material for loans, visitors, enquiries and conservation.	1301B Have good knowledge of the organisation of the collections. Modify organisation based on taxonomic or classification systems in use with agreement of line management.
	1302A Put material away in the correct part of the collection. Re-label and re-order collections as directed in light of taxonomic/classification changes. Carry out prioritisation/reorganisation/deaccession etc. of collections according to space and resources available?	1302B Undertake organisation projects within nominated collection taking account of local space and resources, e.g. collection furniture.
	1303A Follow instructions to curate/maintain /conserve a collection or collections within designated Area of Responsibility.	1303B Curate/conserve a collection and assess the resources need to do so. e.g. incorporating backlogs, re-spiriting, re-housing, <i>etc.</i>
Level	Module elements: 1301 Underlying Basis for the Organisation 1302 Physical Organisation and Space Planning 1303 Collection Maintenance	Duration: see course descriptions below
Methodologies	Lectures Discussion groups	

	Workshop On-the-job	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method for course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1301C</p> <p>Make decisions on organisation of collections. E.g. taxonomic system Lead on collections organisation projects.</p>	<p>1301D</p> <p>Approve and oversee major changes to the organisation of Area of Responsibility, e.g. following new classification system, and prioritises resources. Bid and tender for resources. E.g. additional storage furniture, space, labour to move collections etc. Provide advice on collections policy issues relating to collections organisation to other institutions.</p>
	<p>1302C</p> <p>Critically review collection organisation for all collections within Area of Responsibility. Manage collection reorganisations project. Decide on deaccession of collections and if necessary tactfully reject potential new incoming collections.</p>	<p>1302D</p> <p>Review space planning for Area of Responsibility and assess short and long term curation requirements. Ensure that above integrates with institution space planning.</p>
	<p>1303C</p> <p>Prioritises and reviews curation/maintenance/conservation schedule for all collections within Area of Responsibility in light of available resources.</p>	<p>1303D</p> <p>Assess Collection Area needs and determine overall maintenance/conservation strategy and allocate resources to priority areas.</p>

LEARNING MODULE ELEMENTS	
<p>Underlying Basis for the Organisation</p> <p>Physical Organisation and Space Planning</p> <p>Collection Maintenance</p> <p>1301AB 1302AB 1303AB</p> <p>1301CD 1302CD 1303CD</p>	<p>Title: Basic collections techniques Organising institution(s)/organisation(s): SYNTHESYS & Museum fur Naturkunde Berlin Language: English Content: Natural History focused (general, zoological, entomological, taxidermy & skins – also useful for botanical, molecular and palaeontology) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European, international Periodicity: one time in the framework of a special occasion Duration: 3 days URL: http://synthesys.cybertaxonomy.africamuseum.be/page/basic_collections_techniques</p>
<p>Underlying Basis for the Organisation</p> <p>Physical Organisation and Space Planning</p> <p>Collection Maintenance</p> <p>1301AB 1302AB 1303AB</p> <p>1301CD 1302CD 1303CD</p>	<p>Title: Conservation of Natural History Collections Organising institution(s)/organisation(s): Amgueddfa cymru - National Museum Wales Language: English Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils) Level training: non-academic Target audience: variable - high school, undergraduate, master, museum professionals Geographical range of audience: international Periodicity: on demand Duration: variable URL: -</p>
<p>Underlying Basis for the Organisation</p> <p>Physical Organisation and Space Planning</p> <p>Collection Maintenance</p> <p>1301AB 1302AB 1303AB</p> <p>1301CD 1302CD 1303CD</p>	<p>Title: Conservation of Natural History Materials Organising institution(s)/organisation(s): Natural History Museum London Language: English Content: Natural History focused (general, botanical, zoological, taxidermy & skins, molecular, fossils, rocks & minerals, ethnographic) Level training: non-academic Target audience: technicians, collections managers, curators, conservators Geographical range of audience: international</p>

	<p>Periodicity: on demand Duration: 5 days URL: -</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: Behoud en beheer van collecties / Gestion des collections Organising institution(s)/organisation(s): Royal Belgian Institute of Natural Sciences Language: Dutch/French Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks and minerals, metal & paintings) Level training: non- academic Target audience: technicians, collections managers, curators Geographical range of audience: national, mainly in-house however also collection collaborators of other institutes were invited Periodicity: regularly organised until 2011, on demand Duration: 2-3 days depending on educational level of participants URL: -</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: Natural Science Collections Development Organising institution(s)/organisation(s): Welsh Museums Federation Language: English Content: Natural History focused (botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: curators Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 1 day URL: -</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: Collection Management Organising institution(s)/organisation(s): Natural History Museum, Florence University Language: English Content: Natural History focused (general) Level training: non-academic Target audience: collections managers, curators Geographical range of audience: national Periodicity: on demand</p>

	<p>Duration: 4 days URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: Collection management Organising institution(s)/organisation(s): Hungarian Natural History Museum Language: Hungarian Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: technicians Geographical range of audience: national Periodicity: on demand Duration: 5 weeks URL:</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: SYNTHESYS Course in Management, Conservation and Care of Natural History Collections Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid Language: English Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils) Level training: non-academic Target audience: undergraduates Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: 1 week URL: -</p>
<p>Underlying Basis for the Organisation Physical Organisation and Space Planning Collection Maintenance 1301AB 1302AB 1303AB 1301CD 1302CD 1303CD</p>	<p>Title: Técnicas básicas de conservación y mantenimiento de colecciones de historia natural y materiales didácticos en ies con fondos históricos Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales Language: Spanish Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD) Geographical range of audience: national</p>

	Periodicity: on demand Duration: 3 days URL: -

Competency Based Curriculum

Unit of Competency	1. Collections Management, Conservation and Care 1.4 Risk Management	
Module title	MODULE 1.4 MANAGING RISKS	
Purpose statement	The purpose of this module is to provide competency based learning in managing risks to the collection	
Module descriptor	This module covers the knowledge, skills and attitude required to manage a variety of risks to the collections and how management of those risks have an impact on the museum collections.	
Level Induction learning	Module elements: 1401 Deterioration agents 1401 Handling material 1402 Environmental monitoring 1403 Integrated Pest Management 1404 Collections Security 1405 Disaster Planning General 1406 Disaster Planning Practical	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job On-line resources	
Recommended assessment method learners	Written examination Practical exercise Interview	

Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1401A</p> <p>Handle material in the correct manner.</p> <p>Recognise and understand how to deal with the agents of deterioration.</p> <p>Be aware of other risks to assigned collections listed in the departmental risk log.</p>	<p>1401B</p> <p>Understand risk management as applied to collections.</p> <p>Implement activities to reduce risks, e.g. actively monitors the risks to local collection. Reports issues to managers and takes immediate action as required.</p> <p>Make recommendations for amendments to departmental risk documentation (e.g. risk log).</p>
	<p>1402A</p> <p>Carry out basic monitoring duties following instruction e.g. use environmental monitoring equipment effectively.</p> <p>Place monitors in best position to gather data effectively.</p>	<p>1402B</p> <p>Interpret and manipulate data retrieved from monitoring equipment.</p> <p>Provide reports to managers based on retrieved data.</p> <p>Understand Museum's environmental monitoring system.</p>
	<p>1403A</p> <p>Be aware of importance of all IPM and quarantine procedures.</p> <p>Follow IPM and quarantine procedures with minimal supervision.</p>	<p>1403B</p> <p>Understand and apply procedures for managing pest infestations without supervision.</p> <p>Carry out regular pest monitoring programmes.</p>
	<p>1404A</p> <p>Be aware of security issues and follows Departmental security procedures.</p>	<p>1404B</p> <p>Be aware of location of vulnerable and significant material within designated Area of Responsibility and ensures it is safely stored.</p> <p>Undertake audit of vulnerable and significant material within designated Area of Responsibility</p> <p>(Vulnerable = at risk i.e. high value, historical, cultural, endangered)</p>

		species, etc.) Include priority material to be rescued first in an emergency
	<p>1405A</p> <p>Understand their role in Collections Rescue and Recovery ie emergency planning.</p> <p>Be familiar with disaster planning arrangements for the Area of Responsibility</p>	<p>1405B</p> <p>Manage day-to-day business to reduce risks likely to initiate a disaster.</p>
	<p>1406A</p> <p>Know where the relevant salvage equipment is stored and how to use it. e.g. mops, buckets, plastic sheeting etc</p> <p>Carry out “clean up” procedures under instruction and know which key staff to contact.</p>	<p>1406B</p> <p>Participate in team or be personally responsible for carrying out salvage operations</p> <p>Maintain disaster stores. Regularly updates equipment.</p> <p>Train other staff to use the equipment.</p> <p>Liaise with Estates over contents of central disaster store.</p>
<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>1401 Deterioration agents</p> <p>1401 Handling material</p> <p>1402 Environmental monitoring</p> <p>1403 Integrated Pest Management</p> <p>1404 Collections Security</p> <p>1405 Disaster Planning General</p> <p>1406 Disaster Planning Practical</p>	<p>Duration:</p> <p>See course descriptions below</p>
<p>Methodologies</p>	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p>	

	On-the-job On-line resources	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method for course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>1401C</p> <p>Be up to date on the latest information and techniques on mitigating the effects of deterioration.</p> <p>Manage and regularly reviews the risks to all collections within Area of Responsibility.</p> <p>Update the departmental risk log.</p>	<p>1401D</p> <p>Maintain the Risk Management Plan for the Department.</p> <p>Maintain risk management plan for Area of Responsibility.</p> <p>Prioritise mitigation for Area of Responsibility.</p> <p>Contribute to cross Museum identification and prioritisation of risks to collections.</p>
	<p>1402C</p> <p>Manage the environmental monitoring all collections within Area of Responsibility.</p> <p>Carry out an environmental survey of a space and report on suitability to house collections including those on exhibition in galleries.</p>	<p>1402D</p> <p>Represent department and Museum on a range of environmental issues.</p> <p>Review and approve environmental standards.</p> <p>Advocate agreed Environmental Standards for Area of Responsibility.</p> <p>Use collated data to develop a strategy for collections care and to inform master plan for development of new spaces and upgrading of old.</p>
	<p>1403C</p> <p>Advise on management of pest related issues.</p>	<p>1403D</p> <p>Review and approve IPM policy and procedures for the Museum.</p>

	Report at departmental level on IPM and co-ordinates monitoring programme.	Ensure IPM policy is implemented and adhered to.
	<p>1404C</p> <p>Ensure all “vulnerable” material in collections within Area of Responsibility is in suitable housing.</p> <p>Manage audit of “vulnerable” material in collections within Area of Responsibility.</p>	<p>1404D</p> <p>Develop and maintains a collections security strategy for Area of Responsibility.</p> <p>Initiate strategy and manages audit of “vulnerable” material for Area of Responsibility.</p>
	<p>1405C</p> <p>Be a key member of the department/institutions salvage team and provides advice for rescue of all collections within their Area of Responsibility. (ie the are the main Emergency contact for that area).</p>	<p>1405D</p> <p>Instigate, develop and manage emergency planning, i.e. business continuity, disaster, and collections salvage plans for Area of Responsibility.</p> <p>Disseminate plan to staff in Area of Responsibility</p> <p>Contribute to Institution’s Business Continuity and Crisis Management Plan.</p>
	<p>1406C</p> <p>Manage disaster planning for all collections within Area of Responsibility.</p> <p>Disseminate plan to local team.</p> <p>Investigate new techniques for salvage.</p> <p>Carry out specialist recovery treatment of materials.</p>	<p>1406D</p> <p>Liaise with other departments to develop Museum-wide approach, when appropriate.</p> <p>Co-ordinate cross-institution Collections Rescue and Recovery response to disaster.</p>
LEARNING MODULE ELEMENTS		
<p>Handling material</p> <p>1401AB</p>	<p>Title: Object Handling and Packing</p> <p>Organising institution(s)/organisation(s): National Museums Scotland</p> <p>Language: English</p> <p>Content: Cultural Heritage & Natural History (all kinds of museum objects including NH</p>	

<p>1401CD</p>	<p>specimens) Level training: non-academic Target audience: technicians, collections managers, curators, anyone involved in handling packing Geographical range of audience: national, international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 1 day URL: http://www.nms.ac.uk/pdf/Object%20Handling%202014.pdf</p>
<p>Handling material 1401AB 1401CD</p>	<p>Title: Packing and Transport of Museum Objects Organising institution(s)/organisation(s): International Academic Projects Language: English Content: Cultural Heritage & Natural History (all kind of objects) Level training: non-academic Target audience: technicians, collections managers, curators, anyone involved in handling packing Geographical range of audience: international Periodicity: on demand Duration: 2 days URL: http://www.academicprojects.co.uk/</p>
<p>Handling material 1401AB 1401CD</p>	<p>Title: Kursus i praktisk genstandshåndtering - Course in practical object handling Organising institution(s)/organisation(s): The Association of Danish Museums Language: Danish Content: Cultural Heritage focused (all kind of objects) Level training: non-academic Target audience: technicians, collections managers, curators, for people handling museum objects Geographical range of audience: international (but course in Danish) Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 1 day URL: http://www.dkmuseer.dk/content/kursus-i-praktisk-genstandsh%C3%A5ndtering-fuldtegnet-m-venteliste</p>
<p>Handling material Environmental monitoring</p>	<p>Title: Genstandshåndtering - Object handling Organising institution(s)/organisation(s): The Association of Danish Museums Language: Danish</p>

<p>1401AB 1402AB 1401CD 1402CD</p>	<p>Content: Cultural Heritage focused (all kind of objects) Level training: non-academic Target audience: technicians, collections managers, curators, for people handling objects Geographical range of audience: international (but course in Danish) Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 1 day URL: http://www.dkmuseer.dk/content/genstandsh%C3%A5ndtering-fuldtegnnet-m-venteliste</p>
<p>Handling material 1401AB 1401CD</p>	<p>Title: Ponencia Riesgos en la manipulación de colecciones de Historia Natural.// Risk handling of Natural History collections Organising institution(s)/organisation(s): Museo Nacional de Antropología /National Anthropology Museum Language: Spanish Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 1 hour (part of other course) URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management Collections Security 1401AB 1402AB 1403AB 1404AB 1401CD 1402CD 1403CD 1404CD</p>	<p>Title: Basic collections techniques Organising institution(s)/organisation(s): SYNTHESYS & Museum fur Naturkunde Berlin Language: English Content: Natural History focused (general, zoological, entomological, taxidermy & skins – also useful for botanical, molecular and palaeontology) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European, international Periodicity: one time in the framework of a special occasion Duration: 3 days URL: http://synthesys.cybertaxonomy.africamuseum.be/page/basic_collections_techniques</p>
<p>Deterioration agents</p>	<p>Title: Behoud en beheer van collecties (NL) / Gestion des collections (FR) Organising institution(s)/organisation(s): Royal Belgian Institute of Natural Sciences</p>

<p>Handling material Environmental monitoring Integrated Pest Management</p> <p>Collections Security</p> <p>Disaster Planning General & Practical</p> <p>1401AB 1402AB 1403AB 1404AB 1405AB 1406AB</p> <p>1401CD 1402CD 1403CD 1404CD 1405CD 1406CD</p>	<p>Language: Dutch/French</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks and minerals, metal & paintings)</p> <p>Level training: non- academic</p> <p>Target audience: technicians, collections managers, curators</p> <p>Geographical range of audience: national, mainly in-house however also collection collaborators of other institutes were invited</p> <p>Periodicity: regularly organised until 2011, on demand</p> <p>Duration: 2-3 days depending on educational level of participants</p> <p>URL: -</p>
<p>Deterioration agents</p> <p>Handling material</p> <p>Environmental monitoring</p> <p>Integrated Pest Management</p> <p>Collections Security</p> <p>Disaster Planning General & Practical</p> <p>1401AB 1402AB 1403AB 1404AB 1405AB 1406AB</p> <p>1401CD 1402CD 1403CD 1404CD 1405CD 1406CD</p>	<p>Title: Collection Management</p> <p>Organising institution(s)/organisation(s): Natural History Museum, Florence University</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 4 days</p> <p>URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
<p>Deterioration agents</p> <p>Handling material</p> <p>Environmental monitoring</p> <p>Disaster Planning General & Practical</p> <p>1401CD 1402CD 1405CD 1406CD</p>	<p>Title: SYNTHESYS Advanced Training in Collections Management. Molecular collections management and linkage between biological specimen repositories and molecular sequence databases</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid</p> <p>Language: English</p> <p>Content: Natural History focused (molecular collections)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators, graduates (MSc, PhD), postgraduates</p>

	<p>Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: 2 days URL: http://synthesys.cybertaxonomy.africamuseum.be/node/103</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management Disaster Planning General & Practical 1401AB 1402AB 1403AB 1404AB 1405AB 1406AB 1401CD 1402CD 1403CD 1404CD 1405CD 1406CD</p>	<p>Title: SYNTHESYS Course in Management, Conservation and Care of Natural History Collections Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid Language: English Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils) Level training: non-academic Target audience: undergraduates Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: 1 week URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management Disaster Planning General & Practical 1401AB 1402AB 1403AB 1405AB 1406AB 1401CD 1402CD 1403CD 1405CD 1406CD</p>	<p>Title: Técnicas básicas de conservación y mantenimiento de colecciones de historia natural y materiales didácticos en ies con fondos históricos Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales Language: Spanish Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD) Geographical range of audience: national Periodicity: on demand Duration: 3 days URL: -</p>
<p>Handling material Environmental monitoring Integrated Pest Management</p>	<p>Title: Care of Natural History Collections Organising institution(s)/organisation(s): Lancashire County Council Museums Services Language: English Content: Natural History focused (zoological, botanical, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals)</p>

<p>1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Level training: non-academic Target audience: technicians, collections managers, curators, volunteers, student placement, interns Geographical range of audience: in-house and regional Periodicity: on a regular basis Duration: 1 day URL: -</p>
<p>Handling material Environmental monitoring Integrated Pest Management Disaster Planning General & Practical 1401AB 1402AB 1403AB 1405AB 1406AB 1401CD 1402CD 1403CD 1405CD 1406CD</p>	<p>Title: International Conservation Symposium-Workshop Organising institution(s)/organisation(s): Centre de Restauració i Interpretació Paleontologic CRIP Language: English Content: Natural History focused (zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD), postgraduates Geographical range of audience: international Periodicity: every two years Duration: 3 days URL: http://www.crip.cat/</p>
<p>Deterioration agents Handling material Environmental monitoring 1401AB 1402AB 1401CD 1402CD</p>	<p>Title: Natural Science Collections Development Organising institution(s)/organisation(s): Welsh Museums Federation Language: English Content: Natural History focused (botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: curators Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 1 day URL: -</p>
<p>Deterioration agents Handling material</p>	<p>Title: Collection management Organising institution(s)/organisation(s): Hungarian Natural History Museum Language: Hungarian</p>

<p>Environmental monitoring Integrated Pest Management Collections Security 1401AB 1402AB 1403AB 1404AB 1401CD 1402CD 1403CD 1404CD</p>	<p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: technicians Geographical range of audience: national Periodicity: on demand Duration: 5 weeks URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring 1401AB 1402AB 1401CD 1402CD</p>	<p>Title: Collection and preparation of specimens Organising institution(s)/organisation(s): Szent István University Language: Hungarian Content: Natural History focused (zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular) Level training: academic (master) Target audience: graduates (MSc, PhD) Geographical range of audience: national Periodicity: on demand Duration: 6 hours URL: -</p>
<p>Environmental monitoring Integrated Pest Management Disaster Planning General & Practical 1402AB 1403AB 1405AB 1406AB 1402CD 1403CD 1405CD 1406CD</p>	<p>Title: Conservation of Natural History Materials Organising institution(s)/organisation(s): Natural History Museum London Language: English Content: Natural History focused (general, botanical, zoological, taxidermy & skins, molecular, fossils, rocks & minerals, ethnographic) Level training: non-academic Target audience: technicians, collections managers, curators, conservators Geographical range of audience: international Periodicity: on demand Duration: 5 days URL: -</p>
<p>Deterioration agents Handling material</p>	<p>Title: Conservation of Natural History Collections Organising institution(s)/organisation(s): Amgueddfa cymru - National Museum Wales Language: English</p>

<p>Environmental monitoring Integrated Pest Management</p> <p>1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils) Level training: non-academic Target audience: variable - high school, undergraduate, master, museum professionals Geographical range of audience: international Periodicity: on demand Duration: variable URL: -</p>
<p>Disaster Planning General & Practical</p> <p>1405AB 1406AB 1405CD 1406CD</p>	<p>Title: Notfallplanung (Disaster preparedness) Organising institution(s)/organisation(s): Hochschule für Technik und Wirtschaft Berlin Language: German Content: Natural History focused (zoological collections used as example) Level training: non-academic Target audience: museum professionals at different levels up to PhD Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 2-3 days URL:</p>
<p>Disaster Planning General & Practical</p> <p>1405AB 1406AB 1405CD 1406CD</p>	<p>Title: Disaster Preparedness Organising institution(s)/organisation(s): GfBS Curators group (Peter Giere, MfN) Language: German/English Content: Natural History focused (general) Level training: non-academic Target audience: collections managers, curators Geographical range of audience: national, European, international Periodicity: one time in the framework of a special occasion Duration: 2 hours URL:</p>
<p>Integrated Pest Management</p> <p>1403AB 1403CD</p>	<p>Title: Sammlungsschädlinge (Collection Pests) Organising institution(s)/organisation(s): GfBS Curators Group, Curators Meeting Language: German Content: Natural History focused (botanical, zoological, dried, entomological, taxidermy & skins) Level training: non-academic</p>

	<p>Target audience: collections managers, curators Geographical range of audience: national, Dutch participants were present Periodicity: one time in the framework of a special occasion Duration: 2-3 hours URL: -</p>
<p>Integrated Pest Management 1403AB 1403CD</p>	<p>Title: Integrated Pest Management workshop Organising institution(s)/organisation(s): International Academic Projects Language: English Content: Cultural Heritage & Natural History Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: international Periodicity: on demand Duration: 2 days URL: http://www.academicprojects.co.uk/course-details.php?courseID=746</p>
<p>Collections Security Disaster Planning General & Practical 1405AB 1406AB 1405CD 1406CD</p>	<p>Title: Effective collections emergency planning and salvage Organising institution(s)/organisation(s): SYNTHESYS & Royal Museum for Central Africa Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: lunch-to-lunch course URL: http://synthesys.cybertaxonomy.africamuseum.be/node/94</p>
LEARNING ON SPECIFIC COLLECTIONS	
<p>Handling material Environmental monitoring Integrated Pest Management 1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Title: Colecciones de Vertebrados: Preparación e introducción a su Conservación y Mantenimiento Organising institution(s)/organisation(s): Consejo Superior de Investigaciones Científicas (CSIC) Language: Spanish Content: Natural History focused (zoological, fluid-preserved, dried, taxidermy & skins) Level training: non-academic</p>

	<p>Target audience: undergraduates, professional development Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 2 months URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management 1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Title: International Diploma in Herbarium Techniques Organising institution(s)/organisation(s): Royal Botanic Gardens Kew Language: English Content: Natural History focused (botanical, fluid-preserved, dried) Level training: non-academic Target audience: technicians Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 8 weeks URL: http://www.kew.org/learn/specialist-training/international-diploma-herbarium-techniques</p>
<p>Handling material Environmental monitoring Integrated Pest Management 1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Title: Caring for Entomology collections Organising institution(s)/organisation(s): Natural Sciences Collections Association (NatSCA) Language: English Content: Natural history focused (entomological) Level training: non-academic Target audience: collections managers, curators, professional development for museum staff Geographical range of audience: international Periodicity: on demand Duration: 1 day URL: http://www.icon.org.uk/index.php?option=com_content&task=view&id=1647&Itemid=129</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management</p>	<p>Title: Caring for Botanical Collections Organising institution(s)/organisation(s): Natural Sciences Collections Association (NatSCA) Language: English Content: Natural History focused (botanical) Level training: non-academic Target audience: technicians, collections managers, curators, those entering museum</p>

<p>1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>profession Geographical range of audience: international Periodicity: on demand Duration: 1 day URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management Disaster Planning General & Practical 1401AB 1402AB 1403AB 1405AB 1406AB 1401CD 1402CD 1403CD 1405CD 1406CD</p>	<p>Title: Conservation of Fossils and geological material Organising institution(s)/organisation(s): natural-history-conservation.com Language: English Content: Natural History focused (fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), amateur public Geographical range of audience: as required e.g. students, and/or to staff in museums Periodicity: on demand Duration: variable from ½, 1 & 2 days URL: http://www.natural-history-conservation.com/training.htm</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management 1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Title: Fluid preservation (biology), Taxidermy conservation, Entomology conservation (pinned insects), Herbarium conservation (dried plants) Organising institution(s)/organisation(s): natural-history-conservation.com Language: English Content: Natural History focused (botanical, zoological, fluid preserved, dried, entomological, taxidermy & skins) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates (for professionals) Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 4 days (FP), others 2-3 days URL: via www.natural-history-conservation.com</p>
<p>Handling material Disaster Planning General & Practical</p>	<p>Title: Conservación, uso y gestión de bancos de tejidos y ADN - Conservation, use and management of DNA and tissue banks Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales Language: Spanish</p>

<p>1401AB 1405AB 1406AB 1401CD 1405CD 1406CD</p>	<p>Content: Natural History focused (molecular) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD) Geographical range of audience: national, European, international Periodicity: on demand Duration: 3 days URL: -</p>
<p>Deterioration agents Handling material Environmental monitoring Integrated Pest Management</p> <p>1401AB 1402AB 1403AB 1401CD 1402CD 1403CD</p>	<p>Title: Management of herbarium Organising institution(s)/organisation(s): Agentschap Plantentuin Meise (National Botanic Garden of Belgium) Language: French/English/Dutch Content: Natural History focused (botanical, dried) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD), large public, amateur public Geographical range of audience: European, international, in house Periodicity: on demand Duration: from 2 weeks to 3 months URL: -</p>
<p>Handling material Environmental monitoring</p> <p>1401AB 1402AB 1401CD 1402CD</p>	<p>Title: Basic care of wet collections Organising institution(s)/organisation(s): Zoologische Staatssammlung Munich Language: English Content: Natural History focused (fluid-preserved zoological collections) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates Geographical range of audience: European and international Periodicity: on demand (course has also been held in framework of Synthesys training) Duration: 1-2h URL: -</p>
<p>Handling material Environmental monitoring</p>	<p>Title: Care of taxidermy collections Organising institution(s)/organisation(s): NatSCA Language: English Content: Natural History focused (taxidermy & skins)</p>

<p>1401AB 1402AB 1401CD 1402CD</p>	<p>Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates Geographical range of audience: national Periodicity: on demand Duration: 1 day URL: -</p>
<p>Handling material Environmental monitoring</p> <p>1401AB 1402AB 1401CD 1402CD</p>	<p>Title: Working with historic shell collections Organising institution(s)/organisation(s): Freelance (former National Museum of Wales) Language: English Content: Natural History focused (Mollusca) Level training: non-academic Target audience: collections manager, curators Geographical range of audience: international Periodicity: on demand Duration: one week URL: -</p>
<p>ON-LINE LEARNING RESOURCES</p>	
<p>Deterioration agents Handling material Environmental monitoring</p> <p>1401AB 1402AB 1401CD 1402CD</p>	<p><i>Online course organised on a regular basis by Museum Study LCC:</i> Storage materials http://www.museumstudy.com/courses/course-list/storage-materials/</p> <p>Storage Techniques http://www.museumstudy.com/courses/course-list/storage-techniques/</p> <p><i>On-line courses organised on a regular basis by the Northern States Conservation Center</i> Complete course list can found at: http://www.collectioncare.org/course-list courses are 4 weeks on-line – average learning time is 10 hours/week</p> <p>An Introduction to Collections Preservation On-line Course http://www.collectioncare.org/introduction-collections-preservation-line-course</p>

	<p>Materials for Storage and Display On-line Course http://www.collectioncare.org/materials-storage-and-display-line-course</p> <p>Museum Microclimates On-line Course http://www.collectioncare.org/museum-microclimates-line-course</p> <p>Museum Storage Facilities and Furniture On-line Course http://www.collectioncare.org/museum-storage-facilities-and-furniture-line-course</p> <p>Preservation Environments On-line Course http://www.collectioncare.org/preservation-environments-line-course</p> <p>Museum Storage Techniques On-line Course http://www.collectioncare.org/museum-storage-techniques-line-course</p>
<p>Integrated Pest Management 1403AB 1403CD</p>	<p>Integrated Pest Management for Museums, Libraries and Archives On-line Course http://www.collectioncare.org/integrated-pest-management-museums-libraries-and-archives-line-course</p>
<p>Disaster Planning General Disaster Planning Practical 1405AB 1406AB 1405CD 1406CD</p>	<p>Disaster Plan Research and Writing On-line Course http://www.collectioncare.org/disaster-plan-research-and-writing-line-course</p> <p>Disaster Preparation & Recovery On-line Course http://www.collectioncare.org/disaster-preparation-recovery-line-course</p>

Competency Based Curriculum

Unit of Competency	1.5 Collections Care and Conservation	
Module title	MODULE 1.5 CARING AND CONSERVING COLLECTIONS	
Purpose statement	The purpose of this module is to provide competency based learning in collections care and conservation.	
Module descriptor	This module covers the knowledge, skills and attitude related to collections care and conservation required to manage collections and to plan, manage and execute conservation and collections care projects.	
Level Induction learning	Module elements: 1501 Collection Condition Surveys 1502 Condition Report on a Specimen 1503 Conservation Fieldwork 1504 Conservation Project Planning 1505 Remedial Conservation 1506 Specimen Preparation 1507 Preventive Conservation - Rehousing 1508 Preventive Conservation - Cleaning 1509 Replication 1510 New Approaches and Development of Existing Methods - Techniques 1511 New Approaches and Development of Existing Methods - Materials	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job	

Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	1501A Follow survey protocols and contribute effectively to condition surveys.	1501B Plan a condition survey following recognised survey methods/protocols agreed by team or team management. Identify the condition and deterioration of an object. Communicate findings to team and/or team management.
	1502A Complete a basic condition report for an object, after training.	1502B Complete a condition report for a wide range of objects within own materials specialism.
	1503A Carry out basic conservation of specimens in the field, following instruction.	1503B Have field experience and able to prepare field conservation materials and safely lift finds.
	1504A Write and carry out a project plan for the conservation of an object. Accurately document pre-treatment condition, conservation work carried out and materials used.	1504B Decide on conservation requirements and priorities for a collection, taking account of resource issues.
	1505A Carry out remedial conservation tasks under	1505B Plan and carry out remedial conservation tasks without

	general supervision.	supervision, e.g. make a judgement on the appropriate circumstances in which to apply particular treatments within the ethical framework outlined by the profession.
	<p>1506A</p> <p>Prepare specimens within own work area under general supervision.</p> <p>Demonstrate an understanding of the materials they work on within their area of expertise and the potential of the data contained within.</p>	<p>1506B</p> <p>Prepare specimens within own work area without supervision.</p> <p>Make recommendations on preparation.</p> <p>Be skilled in a range of preparation techniques</p> <p>Select the most appropriate tools and techniques to safely reveal scientific information.</p> <p>Use correct anatomical terminology to document the process of preparation and to communicate with researchers.</p> <p>Identify evidence to assist with interpretation of the specimen undergoing preparation and communicate findings to researchers.</p>
	<p>1507A</p> <p>Repackage /rehouse specimens under general supervision.</p>	<p>1507B</p> <p>Plan a collection repackaging/rehousing project, taking account of resource, space and access issues.</p> <p>Design and make (or commission) bespoke storage, travel cases etc. for challenging objects.</p>
	<p>1508A</p> <p>Clean objects and carry out “clean up” procedures in storage areas and surfaces under general supervision.</p> <p>Be aware of mechanism to contact Estates for room cleaning.</p>	<p>1508B</p> <p>Use a range of cleaning techniques on a variety of objects.</p> <p>Use analytical techniques to identify surface pollutants.</p>
	<p>1509A</p> <p>Make simple replicas of objects, under supervision.</p>	<p>1509B</p> <p>Make replicas of objects, using a range of materials and techniques.</p>

	<p>1510A</p> <p>Safely and confidently operate specimen preparation and conservation equipment.</p> <p>Under direction, contribute effectively to research on existing and new methods.</p>	<p>1510B</p> <p>Be aware of current technical advancements.</p> <p>Assess equipment and techniques and recommend which are most appropriate to complete a particular task/outcome.</p> <p>Carry out analytical work needed to decide the most appropriate technique for remedial conservation of a complex object.</p>
	<p>1511A</p> <p>With guidance, apply material science knowledge to assist with the selection of appropriate materials for remedial and preventive conservation tasks following instruction.</p> <p>Be aware of standard literature for appropriate remedial technique for use on an object, to be checked by manager.</p>	<p>1511B</p> <p>Research materials for the remedial and preventive conservation of specific objects and to provide the conservation documentation to show that appropriate material criteria have been used.</p> <p>Review literature associated with the general techniques used for preventive and remedial conservation, as well as techniques within specific area(s) of expertise.</p>
<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>1501 Collection Condition Surveys</p> <p>1502 Condition Report on a Specimen</p> <p>1503 Conservation Fieldwork</p> <p>1504 Conservation Project Planning</p> <p>1505 Remedial Conservation</p> <p>1506 Specimen Preparation</p> <p>1507 Preventive Conservation - Rehousing</p> <p>1508 Preventive Conservation - Cleaning</p> <p>1509 Replication</p>	<p>Duration:</p> <p>See course descriptions below</p>

	<p>1510 New Approaches and Development of Existing Methods - Techniques</p> <p>1511 New Approaches and Development of Existing Methods - Materials</p>	
Methodologies	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p> <p>On-the-job</p> <p>On-line resources</p>	
Recommended assessment method learners	<p>Written examination</p> <p>Practical exercise</p> <p>Interview</p>	
Assessment method for course quality	<p>Feedback from learners via feedback form</p>	
LEARNING OUTCOMES	<p>Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:</p>	
	<p>1501C</p> <p>Audit and provide overview of surveys and evaluations of collection status, e.g. comparing state of collections to recognised benchmarks/standards. Initiate, prioritise and manage condition surveys work programme for all collections within Area of Responsibility.</p>	<p>1501D</p> <p>Set standards, based on condition survey data and, where relevant, international best practice.</p>
	<p>1502C</p> <p>Complete a condition report for a range of objects and material types to a high standard.</p> <p>Manage staff developing their ability to produce quality conservation documentation.</p>	<p>1502D</p> <p>Develop and improve new condition reporting systems.</p> <p>Introduce new methodologies as appropriate taking advantage of technological progress.</p> <p>Develop a standard form for a Condition Report</p>

	<p>1503C</p> <p>Be experienced field work conservator. Understand the issues of the specific environment and make appropriate judgements, with respect to materials and techniques. Excavate finds with skill.</p> <p>Manage a field conservation team.</p>	<p>1503D</p> <p>Provide policy advice on conservation issues for field collection.</p> <p>Decide priorities for the way material is collected. Develops new methodology when required.</p>
	<p>1504C</p> <p>Use a broad experience of conservation issues to give guidance and provide expert advice.</p>	<p>1504D</p> <p>Develop and lead Museum-wide programmes to improve collections care.</p> <p>Initiate new working policy and procedures.</p> <p>Advise other museums on conservation planning</p>
	<p>1505C</p> <p>Carry out complex remedial tasks, and demonstrate a high level of skill in one area of conservation work.</p> <p>Train staff in a wide range of remedial conservation techniques.</p> <p>Develop training programmes in above.</p>	<p>1505D</p> <p>Be expert in remedial conservation.</p> <p>Develop training programmes.</p> <p>Carry out research and collaborate on remedial conservation projects.</p> <p>Contribute to professional training at a national / international level.</p>
	<p>1506C</p> <p>Demonstrate a high level of skill in more than one area of natural history specimen preparation.</p> <p>Balance conflicting demands and decide on method of preparation for difficult/contentious/ rare specimens.</p> <p>Develop new methods of preparation techniques to deal with complex tasks.</p>	<p>1506DE</p> <p>Have a wide understanding of natural history specimen preparation.</p> <p>Carry out research to establish how to apply new techniques on a departmental or Museum basis.</p> <p>Provide advice and practical assistance on preparation methods and approaches to other institutes</p> <p>Develop and coordinate handbook/guidelines for best practice using museum material, e.g. recommended chemistries for</p>

	<p>Have significant understanding of the process of preparation and regularly contributes to scientific papers</p> <p>Lead team undertaking technical preparation work</p>	<p>archival DNA extraction.</p>
	<p>1507C</p> <p>Give expert input and guidance to staff, visitors, etc.</p> <p>Undertake program to rehouse collections in specialist environments. E.g oxygen-free bags.</p> <p>Lead master class in specialist conservation techniques.</p>	<p>1507D</p> <p>Lead preventive conservation strategy across institution.</p> <p>Implement strategic plans to place collections in correct environmental conditions.</p>
	<p>1508C</p> <p>Manage object cleaning projects. Liaises with facilities/estate management staff to develop and maintain cleaning protocols for Area of Responsibility.</p> <p>Improve and develop new object cleaning techniques.</p>	<p>1508D</p> <p>Prioritise cleaning projects and allocate necessary resources.</p> <p>Provide advice and practical assistance for other institutes and museums.</p>
	<p>1509C</p> <p>Be expert in the field of replication.</p> <p>Have a good understanding of replication materials.</p> <p>Deal with the most challenging objects and novel situations.</p>	<p>1509D</p> <p>Be project leader in the area of replication.</p> <p>Estimate resources needed for a project.</p> <p>Be aware of the current science in replication processes.</p>
	<p>1510C</p> <p>Research and develop methods and approaches for collections care, conservation and preparation.</p>	<p>1510D</p> <p>Be recognised international expert in methods and approaches for collections care, conservation and preparation.</p>

	Investigate alternative equipment and techniques to improve the quality of output. Carry out analytical work to pursue appropriate technique for remedial conservation of complex objects.	
	<p>1511C</p> <p>Apply material science knowledge to specify materials.</p> <p>Keep up to date with trends in conservation and conservation ethics and their application in order to apply the appropriate techniques for the material.</p> <p>Develop and customise materials for specific use within preventive and remedial conservation.</p> <p>Do dissemination of and interpretation of information with members and colleagues.</p>	<p>1511D</p> <p>Specify use of materials within the collections for preventive and remedial conservation.</p> <p>Research new methods and materials.</p> <p>Undertake extensive review of discipline and displays critical judgement when making ethical decisions on the treatment of internationally sensitive material.</p>
LEARNING MODULE ELEMENTS		
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Conservation Project Planning</p> <p>Remedial Conservation</p> <p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation - Cleaning</p> <p>New Approaches and Development of</p>	<p>Title: Conservation of Natural History Materials</p> <p>Organising institution(s)/organisation(s): Natural History Museum London</p> <p>Language: English</p> <p>Content: Natural History focused (general, botanical, zoological, taxidermy & skins, molecular, fossils, rocks & minerals, ethnographic)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, conservators</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 5 days</p> <p>URL: -</p>	

<p>Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods – Materials</p> <p>1501AB 1502AB 1504AB 1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1504CD 1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Conservation Project Planning</p> <p>Remedial Conservation</p> <p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods – Materials</p> <p>1501AB 1502AB 1504AB 1505AB 1506AB 1507AB 1510AB 1511AB</p> <p>1501CD 1502CD 1504CD 1505CD 1506CD 1507CD 1510CD 1511CD</p>	<p>Title: Basic collections techniques Organising institution(s)/organisation(s): SYNTHESYS & Museum für Naturkunde Berlin Language: English Content: Natural History focused (general, zoological, entomological, taxidermy & skins – also useful for botanical, molecular and palaeontology) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European, international Periodicity: one time in the framework of a special occasion Duration: 3 days URL: http://synthesys.cybertaxonomy.africamuseum.be/page/basic_collections_techniques</p>
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Remedial Conservation</p>	<p>Title: Les matériaux de conservation Organising institution(s)/organisation(s): Muséum national d’Histoire naturelle Paris Language: French Content: Natural History focused (general) Level training: non-academic</p>

<p>1501AB 1502AB 1505AB 1501CD 1502CD 1505CD</p>	<p>Target audience: technicians, collections managers Geographical range of audience: in-house MNHN Periodicity: one time in the framework of a special occasion Duration: 1 day URL:</p>
<p>Specimen Preparation Preventive Conservation – Rehousing 1506AB 1507AB 1506CD 1507CD</p>	<p>Title: Collection management in Natural History Museum Organising institution(s)/organisation(s): Vyšší odborná škola informačních služeb Language: Czech Content: Natural History focused (general, botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: academic (high school) Target audience: collections managers Geographical range of audience: national Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 3 x 3 hours URL: -</p>
<p>Collection Condition Surveys Condition Report on a Specimen Preventive Conservation – Rehousing 1501AB 1502AB 1507AB 1501CD 1502CD 1507CD</p>	<p>Title: Collection Management Organising institution(s)/organisation(s): Natural History Museum, Florence University Language: English Content: Natural History focused (general) Level training: non-academic Target audience: collections managers, curators Geographical range of audience: national Periodicity: on demand Duration: 4 days URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
<p>Collection Condition Surveys Condition Report on a Specimen Remedial Conservation Preventive Conservation - Rehousing Preventive Conservation - Cleaning</p>	<p>Title: Behoud en beheer van collecties / Gestion des collections Organising institution(s)/organisation(s): Royal Belgian Institute of Natural Sciences Language: Dutch/French Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks and minerals, metal & paintings) Level training: non- academic Target audience: technicians, collections managers, curators Geographical range of audience: national, mainly in-house however also collection</p>

<p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods - Materials</p> <p>1501AB 1502AB 1505AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1505CD 1507CD 1508CD 1510CD 1511CD</p>	<p>collaborators of other institutes were invited</p> <p>Periodicity: regularly organised until 2011, on demand</p> <p>Duration: 2-3 days depending on educational level of participants</p> <p>URL:-</p>
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Remedial Conservation</p> <p>Preventive Conservation – Rehousing</p> <p>1501AB 1502AB 1505AB 1507AB 1501CD 1502CD 1505CD 1507CD</p>	<p>Title: Natural Science Collections Development</p> <p>Organising institution(s)/organisation(s): Welsh Museums Federation</p> <p>Language: English</p> <p>Content: Natural History focused (botanical, zoological, entomological, taxidermy & skins, fossils, rocks & minerals)</p> <p>Level training: non-academic</p> <p>Target audience: curators</p> <p>Geographical range of audience: national</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 1 day</p> <p>URL: -</p>
<p>Remedial Conservation</p> <p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation – Cleaning</p> <p>1505AB 1506AB 1507AB 1508AB 1505CD 1506CD 1507CD 1508CD</p>	<p>Title: Conservation of Natural History Collections</p> <p>Organising institution(s)/organisation(s): Amgueddfa cymru - National Museum Wales</p> <p>Language: English</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils)</p> <p>Level training: non-academic</p> <p>Target audience: variable - high school, undergraduate, master, museum professionals</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: variable</p> <p>URL: -</p>

<p>Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation – Cleaning New Approaches and Development of Existing Methods - Techniques New Approaches and Development of Existing Methods – Materials</p> <p>1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Title: Conservation of Natural History Collections Organising institution(s)/organisation(s): Amgueddfa cymru - National Museum Wales Language: English Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), amateur public Geographical range of audience: international Periodicity: on demand Duration: variable URL: -</p>
<p>Collection Condition Surveys Condition Report on a Specimen Preventive Conservation – Rehousing</p> <p>1501AB 1502AB 1507AB 1501CD 1502CD 1507CD</p>	<p>Title: Care of Natural History Collections Organising institution(s)/organisation(s): Lancashire County Council Museums Services Language: English Content: Natural History focused (zoological, botanical, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, volunteers, student placement, interns Geographical range of audience: in-house and regional Periodicity: on a regular basis Duration: 1 day URL: -</p>
<p>Collection Condition Surveys Condition Report on a Specimen Remedial Conservation</p>	<p>Title: Fördjupningskur i konservering KKV400 - Conservation of organic material, natural history and ethnographic objects Organising institution(s)/organisation(s): Institute Care of Cultural Heritage, University of Gothenburg, Sweden Language: Swedish/English</p>

<p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation - Cleaning</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods - Materials</p> <p>1501AB 1502AB 1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Content: Natural History & Cultural Heritage (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular and objects of art containing natural history material)</p> <p>Level training: academic (part of a Conservation of cultural property course)</p> <p>Target audience: undergraduates</p> <p>Geographical range of audience: national, participants from other Nordic countries</p> <p>Periodicity: on demand</p> <p>Duration: 4 days</p> <p>URL: http://kursplaner.gu.se/svenska/KKV400.pdf</p>
<p>Remedial Conservation</p> <p>Specimen Preparation</p> <p>1505AB 1506AB</p> <p>1505CD 1506CD</p>	<p>Title: Collection and preparation of specimens</p> <p>Organising institution(s)/organisation(s): Szent István University</p> <p>Language: Hungarian</p> <p>Content: Natural History focused (zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular)</p> <p>Level training: academic (master)</p> <p>Target audience: graduates (MSc, PhD)</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 6 hours</p> <p>URL: -</p>
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation - Cleaning</p> <p>New Approaches and Development of Existing Methods - Techniques</p>	<p>Title: Collection management</p> <p>Organising institution(s)/organisation(s): Hungarian Natural History Museum</p> <p>Language: Hungarian</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals)</p> <p>Level training: non-academic</p> <p>Target audience: technicians</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p>

<p>New Approaches and Development of Existing Methods - Materials</p> <p>1501AB 1502AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Duration: 5 weeks URL: -</p>
<p>Preventive Conservation - Rehousing</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods - Materials</p> <p>1507AB 1510AB 1511AB 1507CD 1510CD 1511CD</p>	<p>Title: Técnicas básicas de conservación y mantenimiento de colecciones de historia natural y materiales didácticos en ies con fondos históricos Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales Language: Spanish Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD) Geographical range of audience: national Periodicity: on demand Duration: 3 days URL: -</p>
<p>Remedial Conservation</p> <p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation – Cleaning</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods - Materials</p> <p>1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Title: SYNTHESYS Course in Management, Conservation and Care of Natural History Collections Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid Language: English Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils) Level training: non-academic Target audience: undergraduates Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: 1 week URL: -</p>

<p>Remedial Conservation Preventive Conservation – Cleaning Replication</p> <p>1505AB 1508AB 1509AB 1505CD 1508CD 1509CD</p>	<p>Title: How to Mould and Cast Museum Specimens Organising institution(s)/organisation(s): natural-history-conservation.com Language: English Content: Natural History focused (general, zoological, fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, conservators Geographical range of audience: international Periodicity: on demand Duration: 1 or 2 days URL: http://www.natural-history-conservation.com/training.htm</p>
<p>Replication</p> <p>1509AB 1509CD</p>	<p>Title: Moulding and casting museum objects Organising institution(s)/organisation(s): International Academic Projects Language: English Content: Cultural Heritage & Natural History (all kind of museum objects) Level training: non-academic Target audience: technicians Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 2,5 days URL: http://www.academicprojects.co.uk/course-details.php?courseID=714</p>
<p>Collection Condition Surveys Condition Report on a Specimen Preventive Conservation - Rehousing Preventive Conservation – Cleaning</p> <p>1501AB 1502AB 1507AB 1508AB 1501CD 1502CD 1507CD 1508CD</p>	<p>Title: Genstandshåndtering - Object handling Organising institution(s)/organisation(s): The Association of Danish Museums Language: Danish Content: Cultural Heritage focused (all kind of objects) Level training: non-academic Target audience: technicians, collections managers, curators, for people handling objects Geographical range of audience: international (but course in Danish) Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 1 day URL: http://www.dkmuseer.dk/content/genstandsh%C3%A5ndtering-fuldtegnnet-m-venteliste</p>
<p>Collection Condition Surveys Condition Report on a Specimen</p>	<p>Title: Kursus i praktisk genstandshåndtering - Course in practical object handling Organising institution(s)/organisation(s): The Association of Danish Museums Language: Danish</p>

<p>Preventive Conservation – Rehousing</p> <p>1501AB 1502AB 1507AB</p> <p>1501CD 1502CD 1507CD</p>	<p>Content: Cultural Heritage focused (all kind of objects)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, for people handling museum objects</p> <p>Geographical range of audience: international (but course in Danish)</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 1 day</p> <p>URL: http://www.dkmuseer.dk/content/kursus-i-praktisk-genstandsh%C3%A5ndtering-fuldtegnat-m-venteliste</p>
<p>Collection Condition Surveys</p> <p>Condition Report on a Specimen</p> <p>Preventive Conservation – Rehousing</p> <p>1501AB 1502AB 1507AB</p> <p>1501CD 1502CD 1507CD</p>	<p>Title: Object Handling and Packing</p> <p>Organising institution(s)/organisation(s): National Museums Scotland</p> <p>Language: English</p> <p>Content: Cultural Heritage & Natural History (all kinds of museum objects including NH specimens)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, anyone involved in handling packing</p> <p>Geographical range of audience: national, international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 1 day</p> <p>URL: http://www.nms.ac.uk/pdf/Object%20Handling%202014.pdf</p>
<p>LEARNING ON SPECIFIC COLLECTIONS</p>	
<p>Specimen Preparation</p> <p>Preventive Conservation – Rehousing</p> <p>1506AB 1507AB</p> <p>1506CD 1507CD</p>	<p>Title: Caring for Entomology collections</p> <p>Organising institution(s)/organisation(s): Natural Sciences Collections Association (NatSCA)</p> <p>Language: English</p> <p>Content: Natural history focused (entomological)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators, professional development for museum staff</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 1 day</p>

	<p>URL: http://www.icon.org.uk/index.php?option=com_content&task=view&id=1647&Itemid=129</p>
<p>Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation – Cleaning New Approaches and Development of Existing Methods - Techniques New Approaches and Development of Existing Methods - Materials</p> <p>1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Title: Care of taxidermy collections Organising institution(s)/organisation(s): NatSCA Language: English Content: Natural History focused (taxidermy & skins) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates Geographical range of audience: national Periodicity: on demand Duration: 1 day URL: -</p>
<p>Remedial Conservation Preventive Conservation – Cleaning</p> <p>1505AB 1508AB</p> <p>1505CD 1508CD</p>	<p>Title: Conservation of feathers Organising institution(s)/organisation(s): Horniman Museum Language: English Content: Natural History focused (collections with feathers) Level training: non-academic Target audience: mainly conservators Geographical range of audience: national, European Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 2 days URL: -</p>
<p>Collection Condition Surveys Condition Report on a Specimen Conservation Project Planning Remedial Conservation</p>	<p>Title: Fluid Preservation Course Organising institution(s)/organisation(s): Horniman Museum Language: English Content: Natural History focused (fluid-preserved) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates</p>

<p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation - Cleaning</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods – Materials</p> <p>1501AB 1502AB 1504AB 1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1504CD 1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>(MSc, PhD), postgraduates, amateur public</p> <p>Geographical range of audience: national, European, international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 4 days</p> <p>URL: -</p>
<p>Specimen Preparation</p> <p>Preventive Conservation - Rehousing</p> <p>Preventive Conservation - Cleaning</p> <p>New Approaches and Development of Existing Methods - Techniques</p> <p>New Approaches and Development of Existing Methods - Materials</p> <p>1506AB 1507AB 1508AB 1510AB 1511AB</p> <p>1506CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Title: Caring for Botanical Collections</p> <p>Organising institution(s)/organisation(s): Natural Sciences Collections Association (NatSCA)</p> <p>Language: English</p> <p>Content: Natural History focused (botanical)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, those entering museum profession</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 1 day</p> <p>URL: -</p>
<p>Remedial Conservation</p> <p>Specimen Preparation</p>	<p>Title: Colecciones de Vertebrados: Preparación e introducción a su Conservación y Mantenimiento</p> <p>Organising institution(s)/organisation(s): Consejo Superior de Investigaciones Científicas (CSIC)</p>

<p>Preventive Conservation - Rehousing Preventive Conservation – Cleaning 1505AB 1506AB 1507AB 1508AB 1505CD 1506CD 1507CD 1508CD</p>	<p>Language: Spanish Content: Natural History focused (zoological, fluid-preserved, dried, taxidermy & skins) Level training: non-academic Target audience: undergraduates, professional development Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 2 months URL: -</p>
<p>Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation – Cleaning 1505AB 1506AB 1507AB 1508AB 1505CD 1506CD 1507CD 1508CD</p>	<p>Title: Colecciones de Vertebrados: Preparación e introducción a su Conservación y Mantenimiento Organising institution(s)/organisation(s): Consejo Superior de Investigaciones Científicas (CSIC) Language: Spanish Content: Natural History focused (zoological, fluid-preserved, dried, taxidermy & skins) Level training: non-academic Target audience: undergraduates, professional development Geographical range of audience: national Periodicity: one time in the framework of a special occasion Duration: 2 months URL: -</p>
<p>Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation - Cleaning New Approaches and Development of Existing Methods - Techniques New Approaches and Development of Existing Methods - Materials 1505AB 1506AB 1507AB 1508AB 1510AB 1511AB</p>	<p>Title: International Diploma in Herbarium Techniques Organising institution(s)/organisation(s): Royal Botanic Gardens Kew Language: English Content: Natural History focused (botanical, fluid-preserved, dried) Level training: non-academic Target audience: technicians Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 8 weeks URL: http://www.kew.org/learn/specialist-training/international-diploma-herbarium-techniques</p>

<p>1505CD 1506CD 1507CD 1508CD 1510CD 1511CD</p>	
<p>Collection Condition Surveys Condition Report on a Specimen Remedial Conservation Preventive Conservation - Rehousing Preventive Conservation - Cleaning New Approaches and Development of Existing Methods - Techniques New Approaches and Development of Existing Methods - Materials</p> <p>1501AB 1502AB 1505AB 1507AB 1508AB 1510AB 1511AB</p> <p>1501CD 1502CD 1505CD 1507CD 1508CD 1510CD 1511CD</p>	<p>Title: Conservation of Fossils and geological material Organising institution(s)/organisation(s): natural-history-conservation.com Language: English Content: Natural History focused (fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), amateur public Geographical range of audience: as required e.g. students, and/or to staff in museums Periodicity: on demand Duration: variable from ½, 1 & 2 days URL: http://www.natural-history-conservation.com/training.htm</p>
<p>Collection Condition Surveys Condition Report on a Specimen Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation - Cleaning Replication</p> <p>1501AB 1502AB 1505AB 1506AB 1507AB 1508AB</p> <p>1501CD 1502CD 1505CD 1506CD 1507CD 1508CD</p>	<p>Title: Conservation/ Preparation in Palaeontology Organising institution(s)/organisation(s): IVC+R (Instituto Valenciano de Conservación y Restauración de Bienes Culturales) Language: Spanisch Content: Natural History focused (fossils, rocks & minerals) Level training: non-academic Target audience: technicians, collections managers, curators, graduates (MSc, PhD) postgraduates, amateur public Geographical range of audience: national Periodicity: on a regular basis Duration: 3-5 days URL: http://www.ivcr.es/ivcr.php?area=cursos</p>

<p>Remedial Conservation Specimen Preparation Preventive Conservation – Cleaning 1505AB 1506AB 1508AB 1505CD 1506CD 1508CD</p>	<p>Title: Learn how to restore historic taxidermy specimens to glory Organising institution(s)/organisation(s): Wollaton Hall Language: English Content: Natural History focused (taxidermy & skins) Level training: non-academic Target audience: large public Geographical range of audience: local residence for long term volunteering Periodicity: one time in the framework of a special occasion Duration: 2 weeks URL: http://www.nottinghampost.com/Learn-restore-historic-taxidermy-specimens-glory/story-21175185-detail/story.html</p>
<p>Preventive Conservation – Rehousing 1507AB 1507CD</p>	<p>Title: Basic care of wet collections Organising institution(s)/organisation(s): Zoologische Staatssammlung Munich Language: English Content: Natural History focused (fluid-preserved zoological collections) Level training: non-academic Target audience: technicians, collections managers, curators, undergraduates, graduates (MSc, PhD), postgraduates Geographical range of audience: European and international Periodicity: on demand (course has also been held in framework of Synthesys training) Duration: 1-2h URL: -</p>
<p>Collection Condition Surveys Condition Report on a Specimen Specimen Preparation Preventive Conservation – Rehousing 1501AB 1502AB 1506AB 1507AB 1501CD 1502CD 1506CD 1507CD</p>	<p>Title: Working with historic shell collections Organising institution(s)/organisation(s): Freelance (former National Museum of Wales) Language: English Content: Natural History focused (Mollusca) Level training: non-academic Target audience: collections manager, curators Geographical range of audience: international Periodicity: on demand Duration: one week URL: -</p>

<p>Remedial Conservation Specimen Preparation Preventive Conservation - Rehousing Preventive Conservation – Cleaning 1505AB 1506AB 1507AB 1508AB 1505CD 1506CD 1507CD 1508CD</p>	<p>Title: Management of Archaeological Material Organising institution(s)/organisation(s): Bournemouth University Language: English Content: Cultural Heritage focused (archaeology) Level training: academic (Nautical Archaeological Society accredited short course) Target audience: undergraduates; or to non-graduates/ professionals with significant and relevant work experience Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 1 week URL: http://courses.bournemouth.ac.uk/courses/training-course/management-of-archaeological-material/short-course/4664/course_information-course_overview/</p>
ON-LINE LEARNING RESOURCES	
<p>Collection Condition Surveys Condition Report on a Specimen Preventive Conservation – Rehousing 1501AB 1502AB 1507AB 1501CD 1502CD 1507CD</p>	<p><i>On-line courses organised by Museum Study LCC:</i> Introduction to Natural History Collections http://www.museumstudy.com/courses/course-list/introduction-to-natural-history-collections/</p>
<p>Collection Condition Surveys Condition Report on a Specimen 1501AB 1502AB 1501CD 1502CD</p>	<p><i>On-line courses organised by the Northern States Conservation Center:</i> Condition Assessments On-line Short Course http://www.collectioncare.org/condition-assessments-line-short-course</p>
	<p>Care of specific collections see course list at: http://www.collectioncare.org/course-list</p> <p>Courses are 4 weeks on-line – average learning time is 10 hours/week short courses: 1 week</p>

Competency Based Curriculum

Unit of Competency	2. Access to Collections	
Module title	MODULE 2. ACCESSING COLLECTIONS	
Purpose statement	The purpose of this module is to provide competency based learning in handling different forms of access to collections.	
Module descriptor	This module covers the knowledge, skills and attitude related to handling different forms of access to collections, dealing with access requests and how to implement changes related to access procedures and user needs.	
Level Induction learning	Module elements: 2001 General (Enquiries, Loans, Visitors <i>etc.</i>) 2002 User Needs 2003 Research Loans 2004 Destructive and Invasive Sampling 2005 Visitors to the Collections: General 2006 Visitors to the Collections: Security 2007 Enquiries: Written 2008 Enquiries: Verbal 2009 Enquiry Management	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job	
Recommended assessment method	Written examination Practical exercise	

learners	Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>2001A</p> <p>Provide basic support for users of the Institution's collections (borrowers, visitors, enquirers). E.g. meet and provide visitors with appropriate, equipment, process loans in a timely manner.</p>	<p>2001B</p> <p>Provide in depth assistance to enable access to collection in line with Museum policy and available resources, e.g. staff-time, space, equipment and not having more visitors arriving than can be effectively managed.</p> <p>Deal with complex requests and enquiries in designated Area of Responsibility and make informed decisions on type of response.</p> <p>Implement improvements and new standards.</p> <p>Manage local resources to provide appropriate levels of service. E.g. ensure that visits are scheduled and space for visitors is effectively managed.</p>
	<p>2002A</p> <p>Build understanding of user needs and prioritise these within own workload.</p> <p>Respond to user needs under supervision.</p>	<p>2002B</p> <p>Be aware of changing user needs and compare practices internally and externally to improve access and standards.</p> <p>Discuss users' needs and suggest alternatives where appropriate.</p>
	<p>2003A</p> <p>Understand the procedures necessary to process specimen research loans by following and adhering to international regulations required for transport of material (CITES, Dangerous Goods, etc.).</p> <p>Process specimen loans with minimal supervision e.g. record keeping, pre-loan</p>	<p>2003B</p> <p>Deal with complex requests, make informed decisions and advise on what can be loaned.</p> <p>Process more complex specimen loans within designated Area of Responsibility.</p>

	conservation, specimen packing, loan return reminders, and post-return inspection.	
	<p>2004A</p> <p>Be aware of destructive and invasive sampling policy.</p>	<p>2004B</p> <p>Select and make recommendations for destructive and invasive sampling based on knowledge of local collection and users requirements.</p>
	<p>2005A</p> <p>Be polite. Find out and understand most visitor needs. Relay concerns and difficult requests to line management.</p> <p>Explain to visitors Health and Safety regulations; arrange passes, keys, etc.</p> <p>Provide visitor access to parts of the collection and have background knowledge of the specimens or collections history.</p>	<p>2005B</p> <p>Provide access and have sufficient knowledge to explain and guide the visitor to enhance the visit within resources.</p> <p>Maximise the benefit to the collection from visitors, e.g. encourage expert identification from visitors.</p> <p>Deal with difficult and demanding visitors in a firm but polite way.</p> <p>Relay concerns and difficult requests to line management.</p>
	<p>2006AB</p> <p>Supervise visitor access as necessary to ensure the safety of the collection.</p> <p>Ensure visitors handle material in the correct manner.</p>	
	<p>2007A</p> <p>Answer basic/routine written enquiries as directed by line management but will need to have work checked as appropriate, e.g. for level, accuracy, grammar and spelling.</p> <p>Ensure all enquiries are effectively logged and documented to comply with relevant legislation.</p> <p>Manage this work in a way that promotes customer satisfaction.</p>	<p>2007B</p> <p>Provide detailed answers to enquiries with interpretation of information obtained from a number of sources.</p>

	<p>2008A</p> <p>Speak clearly and politely when dealing with telephone or public enquiries. If unable to answer, pass the enquiry on to appropriate authority e.g manager, press officer.</p>	<p>2008BC</p> <p>Communicate effectively with people at different levels inside and outside the Area of Responsibility.</p> <p>Provide concise information and make sure the enquirer understands the answer.</p> <p>If unable to answer the enquiry will seek information and get back to the enquirer within an agreed time.</p>
	<p>2009A</p> <p>Respond to enquiries for their designated collection under supervision.</p>	<p>2009B</p> <p>Respond to enquiries within the agreed time frame and prioritise as necessary.</p>
<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>2001 General (Enquiries, Loans, Visitors <i>etc.</i>)</p> <p>2002 User Needs</p> <p>2003 Research Loans</p> <p>2004 Destructive and Invasive Sampling</p> <p>2005 Visitors to the Collections: General</p> <p>2006 Visitors to the Collections: Security</p> <p>2007 Enquiries: Written</p> <p>2008 Enquiries: Verbal</p> <p>2009 Enquiry Management</p>	<p>Duration:</p> <p>See course descriptions below</p>
<p>Methodologies</p>	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p> <p>On-the-job</p>	
<p>Recommended</p>	<p>Written examination</p>	

assessment method learners	Practical exercise Interview	
Assessment method for course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>2001C</p> <p>Apply quality standards for access in light of Institution's, national and international regulations and protocols e.g. CETAF, CPB guidelines for access to collections</p> <p>Evaluate how quality standards for access are being applied to all collections within Area of Responsibility.</p> <p>Ensure that user services are balanced with resources available to collections within Area of Responsibility.</p>	<p>2001D</p> <p>Manage and monitor all aspects of access to the collections in line with available resources.</p> <p>Set and develop quality standards for access to collections.</p> <p>Establish procedures to ensure quality standards.</p>
	<p>2002C</p> <p>Change access procedure to meet user needs in division/section/team as appropriate.</p>	<p>2002D</p> <p>Review and develop cross-Museum plans to meet changing user needs.</p>
	<p>2003C</p> <p>Oversee and manage loans in Area of Responsibility.</p> <p>Understand background sufficiently to make informed initial approval for loans.</p> <p>Understand and conform to other legal regulations, e.g. CITES permits, Health and Safety, import/export, transport regulations etc.</p>	<p>2003D</p> <p>Have authority to approves loans on behalf of institutional leadership/governance within policy and understand accountability of this authority.</p> <p>Ensure all loan policies are adhered to and all other legal regulations, e.g. CITES permits, Health and Safety, import/export, transport regulations etc. are met across the Area of Responsibility.</p>

	<p>2004C</p> <p>Makes informed decision on destructive and invasive sampling based on expertise and policy.</p>	<p>2004D</p> <p>Make decision on destructive and invasive sampling of vulnerable material.</p> <p>(Vulnerable = at risk i.e. high value, historical, cultural, endangered species, etc.)</p> <p>Ensure destructive and invasive sampling policy is adhered to.</p>
	<p>2005C</p> <p>Manage visitor access across Area of Responsibility in line with Area of Responsibility and Museum policy within the resource constraints available.</p> <p>Explain assertively issues such as restricted access, and resolve access problems.</p> <p>Discuss visitor needs and assist where appropriate in planning a successful visit pointing to areas of collection perhaps of which they are unaware.</p> <p>If charges are made for services , apply policy for payment of bench fees or negotiate collections work agreements in lieu of fees. E.g. reducing fees for specimens identified/typified etc</p>	<p>2005D</p> <p>Write and update Area of Responsibility policy and procedures for visitor access.</p> <p>Assess visitor pressure and requirements and allocate facilities within resources.</p> <p>When appropriate act on concerns of staff and users to improve visitor policy development and procedures in Area of Responsibility.</p>
	<p>2006C</p> <p>Ensure that staff abide by security procedures of the Museum and Area of Responsibility when dealing with visitors/volunteers</p>	<p>2006DE</p> <p>Work with institution's security/facilities/buildings maintenance staff teams to develop and maintain the safe keeping of the collections within resources.</p> <p>Set security standards for collections.</p>
	<p>2007C</p> <p>Have expert knowledge and summarise complex arguments and concepts from a</p>	<p>2007D</p> <p>Respond to enquiries on behalf of the Area of Responsibility/Institution e.g. corporate level enquiries, sensitive</p>

	variety of original sources in an appropriate form for different audiences.	areas, freedom of information, governmental, departmental issues , high profile media, police enquiries, customs enquiries, high security risk.
	<p>2008BC</p> <p>Communicate effectively with people at different levels inside and outside the Area of Responsibility.</p> <p>Provide concise information and make sure the enquirer understands the answer.</p> <p>If unable to answer the enquiry will seek information and get back to the enquirer within an agreed time.</p>	<p>2008D</p> <p>Provide information on collections/discipline to Institution's corporate centre and outside bodies e.g national heritage organisations, funding bodies, other stakeholders in a clear and understandable way.</p> <p>Represent the Area of Responsibility and Museum for enquiries from outside bodies on policy, process.</p>
	<p>2009C</p> <p>Manage enquiry system and load across team within Area of Responsibility and oversee responses to enquiries as necessary e.g. standardizing responses.</p> <p>Provide advice on legal requirements such as freedom of information regulations.</p>	<p>2009D</p> <p>Ensure enquiry system within the Area of Responsibility conforms to institutional policy. Review and write procedures for Area of Responsibility.</p> <p>Resolve enquiry issues and conflicts.</p>

LEARNING MODULE ELEMENTS

<p>General</p> <p>User Needs</p> <p>Research Loans</p> <p>Visitors to the Collections: General</p> <p>Visitors to the Collections: Security</p> <p>Enquiries: Written</p>	<p>Title: Access to collections</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum Budapest</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: lunch-to-lunch course</p>
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<p>Enquiries: Verbal</p> <p>Enquiry Management</p> <p>2001AB 2002AB 2003AB 2005AB 2006AB 2007AB 2008AB 2009AB</p> <p>2001CD 2002CD 2003CD 2005CD 2006CD 2007CD 2008CD 2009CD</p>	<p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/92</p>
<p>General</p> <p>User Needs</p> <p>Research Loans</p> <p>Visitors to the Collections: General</p> <p>Visitors to the Collections: Security</p> <p>Enquiries: Written</p> <p>Enquiries: Verbal</p> <p>Enquiry Management</p> <p>2001AB 2002AB 2003AB 2005AB 2006AB 2007AB 2008AB 2009AB</p> <p>2001CD 2002CD 2003CD 2005CD 2006CD 2007CD 2008CD 2009CD</p>	<p>Title: Collection Management</p> <p>Organising institution(s)/organisation(s): NHM, Florence University</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 4 days</p> <p>URL: http://formazionepersonale.unifi.it/info_corso.php?IDCORSO=587</p>
<p>General</p> <p>User Needs</p> <p>Research Loans</p> <p>Visitors to the Collections: General</p> <p>Visitors to the Collections: Security</p> <p>Enquiries: Written</p>	<p>Title: Collection management</p> <p>Organising institution(s)/organisation(s): Hungarian Natural History Museum</p> <p>Language: Hungarian</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals)</p> <p>Level training: non-academic</p> <p>Target audience: technicians</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 5 weeks</p>

<p>Enquiries: Verbal</p> <p>Enquiry Management</p> <p>2001AB 2002AB 2003AB 2005AB 2006AB 2007AB 2008AB 2009AB</p> <p>2001CD 2002CD 2003CD 2005CD 2006CD 2007CD 2008CD 2009CD</p>	<p>URL: -</p>
<p>General</p> <p>User Needs</p> <p>Research Loans</p> <p>Visitors to the Collections: General</p> <p>Visitors to the Collections: Security</p> <p>Enquiries: Written</p> <p>Enquiries: Verbal</p> <p>Enquiry Management</p> <p>2001AB 2002AB 2003AB 2005AB 2006AB 2007AB 2008AB 2009AB</p> <p>2001CD 2002CD 2003CD 2005CD 2006CD 2007CD 2008CD 2009CD</p>	<p>Title: Técnicas básicas de conservación y mantenimiento de colecciones de historia natural y materiales didácticos en ies con fondos históricos</p> <p>Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales</p> <p>Language: Spanish</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, graduates Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 3 days</p> <p>URL: -</p>
<p>General</p> <p>User Needs</p> <p>Research Loans</p> <p>Destructive and Invasive Sampling</p> <p>Visitors to the Collections: General</p> <p>Visitors to the Collections: Security</p>	<p>Title: Herbarium Management Training</p> <p>Organising institution(s)/organisation(s): Botanische Staatssammlung München</p> <p>Language: German/English</p> <p>Content: Natural History focused (botanical, dried, molecular)</p> <p>Level training: non-academic</p> <p>Target audience: starting with bachelor students</p> <p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 6-8 weeks</p> <p>URL: http://www.botanischestaatssammlung.de/general/training.html</p>

<p>Enquiries: Written</p> <p>Enquiries: Verbal</p> <p>Enquiry Management</p> <p>2001AB 2002AB 2003AB 2004AB 2005AB 2006AB 2007AB 2008AB 2009AB</p> <p>2001CD 2002CD 2003CD 2004CD 2005CD 2006CD 2007CD 2008CD 2009CD</p>	
<p>Destructive and Invasive Sampling</p> <p>2004AB (to adapt for induction)</p> <p>2004CD</p>	<p>Title: SYNTHESYS Advanced Training in Collections Management. Molecular collections management and linkage between biological specimen repositories and molecular sequence databases</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid</p> <p>Language: English</p> <p>Content: Natural History focused (molecular collections)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators, graduates, postgraduates</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 2 days</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/103</p>
<p>Destructive and Invasive Sampling</p> <p>2004AB</p> <p>2004CD</p>	<p>Title: Research collections in the contexts of preservation issues and scientific use (Invasive sampling)</p> <p>Organising institution(s)/organisation(s): GfBS Curator's Group, MfN Language: English</p> <p>Content: Natural History focused (botanical, zoological, molecular)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators</p> <p>Geographical range of audience: national, European, international</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 1:30 hours</p> <p>URL: http://biosystem.univie.ac.at/symposia-workshops/</p>

<p>Destructive and Invasive Sampling</p> <p>2004AB</p> <p>2004CD</p>	<p>Conservación, uso y gestión de bancos de tejidos y ADN - Conservation, use and management of DNA and tissue banks</p> <p>Organising institution(s)/organisation(s): Museo Nacional de Ciencias Naturales</p> <p>Language: Spanish</p> <p>Content: Natural History focused (molecular)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, graduates Geographical range of audience: national, European, international</p> <p>Periodicity: on demand</p> <p>Duration: 3 days</p> <p>URL: -</p>

Competency Based Curriculum

Unit of Competency	3. Digital Curation	
Module title	MODULE 3. PRACTICING DIGITAL CURATION	
Purpose statement	The purpose of this module is to provide competency based learning in digitisation of collections.	
Module descriptor	This module covers the knowledge, skills and attitude related to digitisation of collections, data curation and quality, digitisation projects, policies, collections management systems and how to train others.	
Level Induction learning	Module elements: 3001 Data Entry 3002 Query and Reporting 3003 Data Validation and Enhancement 3004 Mass Digitisation: Projects 3005 Mass Digitisation: Digital Imaging 3006 Workflows and Process Management 3007 Manage Collections Data : Quality Control and Assurance 3008 Manage Collections Data: Policies 3009 Database Management: Technical Interface 3011 Collections Management System: Development 3012 Collections Management System: Registry management 3013 Collections Management System: Training and Support	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job	

	On-line resources	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>3001A</p> <p>Use the agreed system/software for managing collections accurately and quickly to incorporate data.</p>	<p>3001B</p> <p>Be sufficiently conversant with the operation of any collections management systems to carry out routine tasks such as searches, loan lists etc. accurately.</p> <p>Have a good understanding of collections data and how these are modelled in the collections management system/databases system</p> <p>.</p> <p>Encode and retrieve data from database.</p>
	<p>3002A</p> <p>Interrogate collections management systems/databases etc to provide information.</p> <p>Use the collections management systems/databases etc. to retrieve information</p> <p>Create customised list views for their own needs.</p> <p>Copy and paste list views into spreadsheets such as Excel if needed.</p> <p>Compile ABCD fields to incorporate existing</p>	<p>3002B</p> <p>Use collections management systems/databases to perform complex queries about holdings.</p> <p>Use reporting system for the specific needs of the end user.</p> <p>Use reporting system to generate bespoke views of data for their own needs (e.g. csv, excel, word).</p>

	database into an appropriate compatible database.	
	3003A Carry out basic data cleansing under supervision.	3003B Undertake enhancing collections within designated Area of Responsibility by improving the data associated with specimens.
	3004A Provide curatorial support for mass digitisation projects, e.g. providing specimens.	3004B Suggest projects for mass digitisation and support development of large import/update files. Manage data entry projects up to 100,000 records.
	3005A Carry out basic specimen imaging with minimal supervision.	3005B Participate in imaging projects. Manipulate images and makes basic decisions on quality. Associate images with specimen records. Curate images. i.e. ensure images are appropriately stored retrievable and metadata updated.
	3006A Contribute to discussions on optimization and planning of workflows.	3006B Appreciate the importance of digitisation processes/procedures and their effective streamlining and organization so that the resulting workflow is an effective use of resources. Show evidence of adhering to and managing existing workflows.
	3007A Carry out basic editing and updating of records. Check database records against data associated with specimens in designated Area of Responsibility and/or registers and card indexes (wherever the fullest information exists).	3007B Have some knowledge of relevant Institutional and international data standards and how they relate to the Museum's digital records. Carry out quality control and assurance on data for collections within designated Area of Responsibility.

	<p>3008A</p> <p>Understand Institution's data standards and procedures.</p>	<p>3008B</p> <p>Contribute to the on-going development of data standards and policies for the Area of Responsibility</p>
	<p>3009A</p> <p>Build simple flat-file databases for import using standard platforms e.g. MS Excel.</p>	<p>3009B</p> <p>Build Excel spreadsheets for importing data spanning two or more Modules and including multi-valued fields and nested grids.</p> <p>Support development of large import/update files.</p> <p>Build relational databases for import with knowledge of data types & indexes e.g. MS Access.</p>
	<p>3010A</p> <p>-</p>	<p>3010B</p> <p>-</p>
	<p>3011A</p> <p>Notify manager of bugs and suggest possible enhancements for collections management system/databases.</p>	<p>3011B</p> <p>Test new versions of collections management system/databases under supervision.</p> <p>Provide input into the design of the collections management system/databases user interface.</p> <p>Keep abreast of new client functionality and make suggestions of how it could be used to improve workflows and information enhancement e.g. 'Resources' and 'Record Templates'.</p>
	<p>3012A</p> <p>Understand functionality and operation of collections management system/databases.</p>	<p>3012B</p> <p>Assist in the operation and functionality of the database, e.g. contribute ideas to the continuous development of the database system.</p> <p>Suggest changes to registry settings to improve use of the collections management system/databases.</p>
	<p>3013A</p> <p>Receive training in use of collections management system/databases to become proficient in basic use.</p>	<p>3013B</p> <p>Advise on where additional training documentation and support is necessary.</p>

<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>3001 Data Entry</p> <p>3002 Query and Reporting</p> <p>3003 Data Validation and Enhancement</p> <p>3004 Mass Digitisation: Projects</p> <p>3005 Mass Digitisation: Digital Imaging</p> <p>3006 Workflows and Process Management</p> <p>3007 Manage Collections Data : Quality Control and Assurance</p> <p>3008 Manage Collections Data: Policies</p> <p>3009 Database Management: Technical Interface</p> <p>3010 Database Management: Advanced Database Management</p> <p>3011 Collections Management System: Development</p> <p>3012 Collections Management System: Registry management</p> <p>3013 Collections Management System: Training and Support</p>	<p>Duration:</p> <p>see course descriptions below</p>
<p>Methodologies</p>	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p> <p>On-the-job</p> <p>On-line resources</p>	
<p>Recommended assessment method learners</p>	<p>Written examination</p> <p>Practical exercise</p> <p>Interview</p>	
<p>Assessment method for course quality</p>	<p>Feedback from learners via feedback form</p>	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>3001C</p> <p>Manage digital curation effort for team and/or Area of Responsibility.</p> <p>Show an in depth understanding of the CMS to document the practical implementation of core collections management processes, e.g. object tracking, loans etc.</p> <p>Sit on Departmental or museum committees for co-ordination and prioritisation of digitisation effort and develops strategy within Area of Responsibility.</p>	<p>3001D</p> <p>Chair departmental and/or museum committees for co-ordination and prioritisation of digitisation effort.</p> <p>Develop strategy within Area of Responsibility, e.g. develop projects to back capture specimen information.</p> <p>Develop projects with external institutions to share digitisation effort.</p> <p>Be official representative of main Area of Responsibility on Institutional digitisation committees.</p> <p>Represent the Museum on International forums on digitisation issues.</p> <p>Give presentations to international audiences on Museum wide digitisation projects.</p>
	<p>3002C</p> <p>Develop report formats for user needs.</p> <p>Use collections management systems/databases to assess collection status and gaps in Area of Responsibility and to respond to enquiries from external groups.</p> <p>Understand and collate data to provide reports to museum-wide and external audiences.</p> <p>Create reports in a variety of formats in response to user needs including labels etc.</p>	<p>3002D</p> <p>Fully manipulate collections management systems/databases to provide reports to satisfy senior level requests and key performance indicators e.g. number of loans sent in a year.</p> <p>Understand and collate data to provide reports to museum-wide and external audiences.</p> <p>Build complex reports that span across departments e.g. for key performance indicators.</p> <p>Produce complex, formatted report templates for institution-wide use e.g. Loan forms, Object Entry forms, Conservation Reports.</p>
	<p>3003C</p> <p>Undertake large data cleaning and data</p>	<p>3003D</p> <p>Develop large-scale data-base projects which link to external</p>

	<p>enhancement projects across Area of Responsibility.</p> <p>Plan and manage specific data cleaning and data enhancement projects across team and/or Area of Responsibility.</p> <p>Be fully conversant with data structure of any collections management systems/databases used.</p>	<p>sources of data, enhancing the Institution's collections.</p> <p>Manage large validation programmes across Area of Responsibility.</p> <p>Represent Department (and/or Area of Responsibility) in Institution-wide projects.</p>
	<p>3004C</p> <p>Manage data entry projects in excess of 100,000 records.</p> <p>Construct import/update files. Manage the import process.</p>	<p>3004D</p> <p>Design, develop and manage mass digitisation projects.</p> <p>Gain external financial support to support major digitisation initiatives.</p> <p>Co-ordinate mass digitisation effort within department (and/or Area of Responsibility).</p>
	<p>3005C</p> <p>Manage imaging projects across team and/or Area of Responsibility</p> <p>Provide resources to support imaging projects across team and/or Area of Responsibility</p> <p>Be aware of technological developments. Makes- adjustments/decisions to purchase new equipment.</p> <p>Develop projects in cooperation and discussion with senior managers</p>	<p>3005D</p> <p>Actively develop and introduce new systems for imaging.</p> <p>Initiate large-scale imaging projects.</p> <p>Manage large-scale image capture projects.</p> <p>Gain funding to support imaging.</p>
	<p>3006C</p> <p>Create and optimise digitisation processes and procedures (workflows).</p>	<p>3006D</p> <p>Monitor and maintain awareness of other digitisation workflows in Institution.</p> <p>Act as central point of contact to ensure that where possible workflows can be linked together to be more efficient and reduced.</p>

	<p>3007C</p> <p>Have a good knowledge of international data standards and make recommendations for restricted vocabularies for lookups.</p> <p>Be responsible for Quality Control of data entries from team and/or Area of Responsibility into collections management systems/databases and carry out periodical audits of accessions/registered specimens.</p> <p>Set up mechanisms to assess quality of data entry etc. Develop and manage the strategy for data cleaning and editing.</p> <p>Run sophisticated manipulations to data within the collections management system/databases used e.g. using global updates</p> <p>Lead data cleaning projects relating to data specific to Area of Responsibility.</p>	<p>3007D</p> <p>Have an excellent knowledge on international data standards, represent the museum on international forums designing these standards.</p> <p>Ensure that implementation of the collections management system/databases is effective and follows policy and procedures.</p> <p>Ensure that data management audits are in place for the Department's databasing. (Area of Responsibility).</p> <p>Lead data cleansing projects covering data for entire collections management system/databases Modules.</p>
	<p>3008C</p> <p>Understand Institution's data policies and procedures in depth. Take a lead in shaping data standards and policies and advise senior staff on data issues.</p>	<p>3008D</p> <p>Contribute to development of Institution's data policies across the museum.</p>
	<p>3009C</p> <p>Design structure and import large datasets into collections management systems/databases.</p> <p>Have senior rights to carry out modifications to dataset (e.g. delete, global update, import records).</p> <p>Undertake data mapping exercises in order to migrate data into the collections management system/databases.</p> <p>Create mapping documents for large datasets</p>	<p>3009D</p> <p>Have administrator rights for the collections management system/databases across the institution.</p> <p>Design and import complex relational databases.</p> <p>Manage databasing effort across Department.</p>

	<p>to be migrated.</p> <p>Represent Area of Responsibility on Museum digitising committees.</p> <p>Import and export datasets to and from the collections management systems/databases.</p> <p>Undertake data manipulation outside the collections management system/databases to enhance data ready for re-import.</p>	
	<p>3010C</p> <p>Build complex relational databases for a multi-user environment.</p> <p>Develop data backup and recovery strategy.</p>	<p>3010D</p> <p>Manage data at a senior level for museum-wide datasets.</p> <p>Build complex databases using an enterprise-level RDBMS database e.g. MySQL, SQLServer, and Oracle.</p> <p>Use advanced systems skills to optimise database performance through indexing, query optimisation, triggers.</p> <p>Use advanced database tools such as Data Transformation Services to modify & manipulate datasets.</p> <p>Be a collections management system/databases Administrator.</p>
	<p>3011C</p> <p>Provide in-depth technical expertise in the design of database modules and interface functionality.</p> <p>Represent Area of Responsibility on Development Committee.</p> <p>Coordinate testing of new versions across the department.</p> <p>Adapt, edit and assess comments about database operations within the Area of Responsibility.</p> <p>Keep abreast of new client functionality and experiments with the functionality to develop improved workflows and information enhancement.</p>	<p>3011D</p> <p>Manage programme of collections management system/databases development for the museum.</p> <p>Provide input into the development of the collections management system/databases globally by liaising with other institutes and developers.</p> <p>Adapt, edit and assess comments about database operations within the Department.</p>

	Develop web page concept briefs with support of IT staff.	
	3012C Manage departmental system administration e.g. define and manage which groups and individual users have various permissions.	3012D Install and administer the database e.g. manage user access permissions & security.
	3013C Develop user-specific documentation and training in the practical implementation of collections management procedures within any collections management system. Run intradepartmental training courses/seminars with assistance from IT staff. Write help documentation for departmental use. Provide collections management system/databases support on a departmental basis.	3013D Assess user needs and develop appropriate courses. Organise museum-wide training courses. Write help documentation for museum-wide use and implement field help. Organise and implement collections management system/databases support system on a museum-wide basis.
LEARNING MODULE ELEMENTS		
Mass Digitisation: Projects Mass Digitisation: Digital Imaging Workflows and Process Management Manage Collections Data : Quality Control and Assurance Manage Collections Data: Policies Database Management: Technical	Title: Information Networks (digitization, IT and related activities for database and collections management) Organising institution(s)/organisation(s): SYNTHESYS & Royal Museum for Central Africa Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, postgraduates, IT specialists dealing with digital collection management Geographical range of audience: European	

<p>Interface</p> <p>Database Management: Advanced Database Management</p> <p>Collections Management System: Development</p> <p>Collections Management System: Registry management</p> <p>3004CD 3005CD 3006CD 3007CD 3008CD 3009CD 3010CD 3011CD 3012CD</p>	<p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 3 days</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/306?107529035=1</p>
<p>Data Entry</p> <p>Query and Reporting</p> <p>Data Validation and Enhancement</p> <p>3001AB 3002AB 3003AB</p>	<p>Title: E-Learning Workshop on Data Recording for Technicians in Natural History Collections and Workshop on Data Quality in Biodiversity Databases</p> <p>Organising institution(s)/organisation(s): GBIF.ES</p> <p>Language: Spanish</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, professional development for museum staff</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis (yearly, 2 times/year etc.)</p> <p>Duration: 30 hours in 2 weeks</p> <p>URL: http://www.gbif.es/formaciondetalles.php?IDForm=127</p>
<p>Mass Digitisation: Projects</p> <p>Manage Collections Data: Policies</p> <p>3004AB 3008AB</p> <p>3004CD 3008CD</p>	<p>Title: Digitization</p> <p>Organising institution(s)/organisation(s): GfBS Curators Group, Peter Giere, MfN</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators</p> <p>Geographical range of audience: national, European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 2-3 hours</p> <p>URL: -</p>

<p>Data Entry</p> <p>Query and Reporting</p> <p>Mass Digitisation: Projects</p> <p>Mass Digitisation: Digital Imaging</p> <p>Manage Collections Data : Quality Control and Assurance</p> <p>Manage Collections Data: Policies</p> <p>3001AB 3002AB 3004AB 3005AB 3007AB 3008AB</p> <p>3001CD 3002CD 3004CD 3005CD 3007CD 3008CD</p>	<p>Title: Biodiversity Information Training</p> <p>Organising institution(s)/organisation(s): Royal Museum for Central Africa</p> <p>Language: English</p> <p>Content: Natural History focused (botanical, zoological)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, graduates (MSc, PhD), postgraduates</p> <p>Geographical range of audience: international, mainly for people from Sub-Saharan Africa</p> <p>Periodicity: planning to do on a regular basis (yearly or once in two years, depending on available funds)</p> <p>Duration: one month</p> <p>URL: http://cabin.cybertaxonomy.africamuseum.be/page/preliminary_program_biodiversity_information_training</p>
<p>Data Entry</p> <p>Query and Reporting</p> <p>Data Validation and Enhancement</p> <p>Mass Digitisation: Projects</p> <p>Mass Digitisation: Digital Imaging</p> <p>3001AB 3002AB 3003AB 3004AB 3005AB</p> <p>3001CD 3002CD 3003CD 3004CD 3005CD</p>	<p>Title: Manejo de colecciones zoológicas / Management of zoological collections</p> <p>Organising institution(s)/organisation(s): Consejería de Empleo, Mujer e Inmigración de la Comunidad de Madrid /Department of Employment, Women and Immigration of the Community of Madrid.</p> <p>Language: Spanish</p> <p>Content: Natural History focused (fossil invertebrates & palaeobotany) – digitizing, inventoring collections, review of digital databases</p> <p>Level training: academic (FP)</p> <p>Target audience: FP Graduates</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 1 year</p> <p>URL: -</p>
ON-LINE LEARNING RESOURCES	
<p>Data Entry</p> <p>Query and Reporting</p> <p>Workflows and Process Management</p>	<p>Collection Inventories On-line Course</p> <p>On-line courses organised on a regular basis by the Northern States Conservation Center</p> <p>http://www.collectioncare.org/collection-inventories-line-course</p>

<p>3001AB 3002AB 3006AB 3001CD 3002CD 3006CD</p>	
<p>Data Entry Query and Reporting Workflows and Process Management Manage Collections Data : Quality Control and Assurance Manage Collections Data: Policies Database Management: Advanced Database Management Collections Management System: Registry management</p> <p>3001AB 3002AB 3006AB 3007AB 3008AB 3010AB 3012AB</p> <p>3001CD 3002CD 3006CD 3007CD 3008CD 3010CD 3012CD</p>	<p>Collection Management Databases On-line Course On-line courses organised on a regular basis by the Northern States Conservation Center http://www.collectioncare.org/collection-management-databases-line-course</p>
	<p>Global Biodiversity Information Facility. 2008. GBIF Training Manual 1: Digitisation of Digitisation of Natural History Collections Data, version 1.0. Copenhagen: Global Biodiversity Information Facility. Available as a PDF from http://www.gbif.org</p>
	<p>The Consortium of Northeastern Herbaria provides an annotated list of resources (with links) relevant to the digitization of biological collections. http://neherbaria.org/digit_resource</p>
	<p>iDigBio provides digitization training workshops as well as a plethora of digitization information and resources https://www.idigbio.org/technical-info https://www.idigbio.org/calendar</p>

GAPS	
Collections Management System: Development 3011CD	Specific IT courses need to be attended to develop knowledge and skills such as in-depth technical expertise in the design of database modules and interface functionality.

Competency Based Curriculum

Unit of Competency	4. Scholarship	
Module title	MODULE 4. ACQUIRING KNOWLEDGE IN SYSTEMATICS AND TAXONOMY, COLLECTIONS-BASED RESEARCH, PUBLISHING, EDUCATION AND TRAINING	
Purpose statement	The purpose of this module is to provide competency based learning in the basics of systematics and taxonomy, collections-based research, publishing, education and training.	
Module descriptor	This module covers the knowledge, skills and attitude required to have expertise in systematics and taxonomy, museology, conservation and other research areas; how to contribute to the relevant research community.	
Level Induction learning	Module elements: 4001 Systematic and Taxonomic Principles 4002 Collections in General 4003 Scholarship: History of the Discipline and Collections 4004 Collections-based Research 4005 Archival Provenance 4006 Keys, Guides and Inventories 4007 Publications 4008 Project Management 4009 Identification Skills 4010 Professional Skills	Duration: see course descriptions below

	<p>4011 Assessment Skills</p> <p>4012 Funding</p> <p>4013 Conferences, Meetings and Workshops</p> <p>4014 Communication with the Media</p> <p>4015 Tertiary Education</p> <p>4016 Teaching - Tertiary Level</p> <p>4017 Teaching - Extra Mural</p> <p>4018 Indicators of Esteem</p> <p>4019 Refereeing</p> <p>4020 Editorship</p>	
Methodologies	<p>Lectures</p> <p>Discussion groups</p> <p>Workshops</p> <p>On-the-job</p>	
Recommended assessment method learners	<p>Written examination</p> <p>Practical exercise</p> <p>Interview</p>	
Assessment method course quality	<p>Feedback from learners via feedback form</p>	
LEARNING OUTCOMES	<p>Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:</p>	
	<p>4001A</p> <p>Learn the basic rules of nomenclature, i.e. understand type concept.</p>	<p>4001B</p> <p>Understand the rules of nomenclature as they relate to their discipline.</p> <p>Have knowledge of the appropriate literature, e.g. revisions, catalogues, documenting synonymy and homonymy etc.</p>

	<p>4002A</p> <p>Develop a working knowledge of an assigned area or collection.</p>	<p>4002B</p> <p>Have a working knowledge of an assigned collection and relevant literature.</p>
	<p>4003A</p> <p>Have demonstrable understanding of the history, importance and scope of the collections and discipline.</p>	<p>4003B</p> <p>Have wide knowledge and carry out investigation on the history of a collection, specimens and collectors.</p>
	<p>4004A</p> <p>Support collections-based research projects in the department under supervision.</p> <p>Complete a skeletal inventory and take standard measurements under supervision.</p>	<p>4004B</p> <p>Carry out and support small collections-based research projects with minimal supervision.</p> <p>Be fully conversant with all aspects of documenting skeletal anatomy and work unsupervised.</p>
	<p>4005A</p> <p>Collate archival information under supervision from a variety of sources.</p>	<p>4005B</p> <p>Identify potential sources for archival research and initiate research process.</p>
	-	<p>4006B</p> <p>Produce keys, guides and inventories of small groups of taxa.</p>
	<p>4007A</p> <p>Provide information/data to support publications.</p>	<p>4007B</p> <p>Be an author on papers in relevant publications.</p>
	<p>4008AB</p> <p>Provide support and input into conservation and collections care research and development projects.</p>	
	<p>4009A</p> <p>Be able to identify relevant material to an appropriate level under direction.</p>	<p>4009B</p> <p>Identify material without supervision and to a high level of accuracy. Have an understanding of where to source the relevant literature, e.g. Zoological Record.</p>

	<p>4010A</p> <p>Develop skills such as use of microscopes, stains, dissection, etc.</p>	<p>4010B</p> <p>Enhance skills as needed to support projects.</p> <p>Have experience of using complex scientific apparatus, e.g. X-rays, SEM.</p> <p>Maintain laboratory scientific equipment.</p>
	<p>4011A</p> <p>Have awareness of the market /scientific value of specimens in their care.</p>	<p>4011B</p> <p>Understand and assess the scientific/market value of specimens/collections.</p> <p>Maintain contact with the natural history specimen market and estimate the value of specimens.</p>
	<p>4012A</p> <p>Provide support to grant applications.</p>	<p>4012B</p> <p>Seek and apply for small grants, internal funds to cover travel, etc.</p>
	<p>4013A</p> <p>Attend and help at workshops and conferences.</p>	<p>4013B</p> <p>Present posters at conferences, present talks at small meetings and workshops.</p> <p>Publicise collections to users.</p>
	<p>4014A</p> <p>Support and facilitate media activities.</p>	<p>4014B</p> <p>Occasionally participate in media activities.</p>
	<p>4015A</p> <p>Supervise and train work placement students.</p>	<p>4015B</p> <p>Supervise and train visiting students and oversees collection access.</p>
		<p>4016B</p> <p>Teach parts of units and set examination questions for undergraduates.</p>
	<p>4017A</p> <p>Engage in informal learning and teaching.</p>	<p>4017B</p> <p>Design and/or teach part of units for extra mural courses, e.g.</p>

		amateur groups. Facilitate informal learning and teaching.
	-	4018B Be a Membership of a relevant learned society or relevant professional body.
	-	4019BC Referee papers in area of expertise for peer-reviewed journals.
	-	4020B Edit popular works
	-	-
Level Advanced learning	Module elements: 4001 Systematic and Taxonomic Principles 4002 Collections in General 4003 Scholarship: History of the Discipline and Collections 4004 Collections-based Research 4005 Archival Provenance 4006 Keys, Guides and Inventories 4007 Publications 4008 Project Management 4009 Identification Skills 4010 Professional Skills 4011 Assessment Skills	Duration: see course descriptions below

	<p>4012 Funding</p> <p>4013 Conferences, Meetings and Workshops</p> <p>4014 Communication with the Media</p> <p>4015 Tertiary Education</p> <p>4016 Teaching - Tertiary Level</p> <p>4017 Teaching - Extra Mural</p> <p>4018 Indicators of Esteem</p> <p>4019 Refereeing</p> <p>4020 Editorship</p> <p>4021 In-House Staff Development</p>	
Methodologies	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p> <p>On-the-job</p>	
Recommended assessment method learners	<p>Written examination</p> <p>Practical exercise</p> <p>Interview</p>	
Assessment method for course quality	<p>Feedback from learners via feedback form</p>	
LEARNING OUTCOMES	<p>Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:</p>	
	<p>4001CD</p> <p>Have expert understanding of the use of rules of nomenclature and codes and relate the importance of the collections to scientific debates, discussion and enquiries; e.g. what type material and named specimens in the collections will inform and illuminate scientific debate.</p>	

	<p>4002C</p> <p>Have a comprehensive knowledge of all collections within Area of Responsibility and relevant literature.</p>	<p>4002D</p> <p>Have exceptional knowledge of the Area of Responsibility and relevant literature. E.g. highly familiar with collectors, represented, know handwriting, relate collection to other collection</p>
	<p>4003C</p> <p>Carry out research on the history of the collections and collectors, and publish the results.</p>	<p>4003D</p> <p>Lead and initiate projects about the history of the collections and collectors.</p>
	<p>4004C</p> <p>Carry out collections-based research as part of a large research programme and be included to provide relevant expertise.</p> <p>Initiate collection-based research projects within the local collection.</p> <p>Develop & update skeletal anatomy data recording systems using current best practice.</p>	<p>4004D</p> <p>Initiate new research projects on a departmental level.</p> <p>Lead collections-based research.</p> <p>Develop the procedures for skeletal anatomy documentation and data collection.</p>
	<p>4005C</p> <p>Plan archival research within Area of Responsibility & develop links with appropriate archives.</p>	<p>4005D</p> <p>Develop procedures for archival research within/across Area of Responsibility</p> <p>Be consulted externally on this area</p>
	<p>4006C</p> <p>Produce keys, guides and inventories, e.g. faunas and floras, monographic treatments.</p>	<p>4006D</p> <p>Author a peer-reviewed, high-impact, scientific key reference.</p>
	<p>4007C</p> <p>Lead author on papers published in relevant journals.</p> <p>Be invited to contribute to publications e.g. individual book chapter.</p>	<p>4007D</p> <p>Regularly publish papers in relevant journals as lead author.</p>

	<p>4008C</p> <p>Participate in research and development projects because of acknowledged expertise.</p>	<p>4008D</p> <p>Lead collaborative research and development projects for collections care and conservation.</p>
	<p>4009C</p> <p>Provide identification skills to support all division/section/team collections based activity.</p> <p>Support research objectives by providing identification skills or with an aim to publish the results.</p> <p>Recognise important historical material.</p>	<p>4009DE</p> <p>Use expertise and experience to advise others.</p> <p>Be internationally acknowledged taxonomic/scientific expert.</p> <p>Be acknowledged to provide detailed expert identification reports and for police and customs identification.</p>
	<p>4010C</p> <p>Be an acknowledged expert in scientific/technical area.</p> <p>Manage scientific departmental equipment ; small-scale collection facilities, e.g. x-ray, dermestarium or large-scale collection facilities e.g. Quarantine, Vertebrate Preparation.</p>	<p>4010D</p> <p>Be an internationally acknowledged scientific/technical expertise.</p>
	<p>4011C</p> <p>Assess and evaluate specimens for scientific and aesthetic merit and accurately assess market values.</p> <p>Provide expert advice to external bodies for assessment and valuations.</p>	<p>4011D</p> <p>Be a recognised consultant to external bodies providing expert assessment and valuations.</p> <p>Influence decision-making about significant items.</p>
	<p>4012C</p> <p>Seek and apply for funding from external agencies to support projects.</p> <p>Form part of a team preparing large-scale funding applications.</p>	<p>4012D</p> <p>Seek and apply for large scale collaborative grants from external agencies as Principal Investigator or as Co-Investigator.</p> <p>Lead Institution's part of an inter-institutional project with external funding.</p>

	<p>4013C</p> <p>Regularly present papers at national and international meetings.</p> <p>Lead workshop sessions.</p>	<p>4013D</p> <p>Be invited regularly to speak at international conferences.</p> <p>Chair sessions at International meetings.</p> <p>Organise international workshops and conferences.</p> <p>Be on the editorial panel for a publication from a major international conference/congress/ workshop.</p>
	<p>4014C</p> <p>Be a recognised Museum spokesperson for media enquiries.</p>	<p>4014D</p> <p>Be consultant to major media series i.e. several television/radio programmes with common theme and facilitate access to collections and staff.</p>
	<p>4015C</p> <p>Generate Masters projects and supervise Masters students</p>	<p>4015D</p> <p>Generate PhD projects and supervise PhD students.</p> <p>Examines PhD theses.</p>
	<p>4016C</p> <p>Teach parts of units and set examination questions for Masters courses.</p>	<p>4016D</p> <p>Co-ordinate a module or course for university undergraduates and masters students.</p>
	<p>4017C</p> <p>Design and /or teach courses for specific specialist groups, e.g. veterinarian groups.</p> <p>Lead informal learning and teaching.</p>	<p>4017D</p> <p>Design and /or teach national or international groups.</p> <p>Provide oversight and coordination of delivery of informal learning by his/her team</p>
	<p>4018C</p> <p>Be a committee member of a learned society or relevant professional body.</p>	<p>4018D</p> <p>Chair, or be on the committee, of relevant international/national organisation.</p> <p>Be member of a committee that sets a strategic direction for your area.</p>

	4019BC Referee papers in area of expertise for peer-reviewed journals.	4019D Be editor or on editorial board of internationally recognised relevant journal or trade magazine.
	4020C Edit general scientific – technical work.	4020D Edit a contributed volume.
	4021C Provide tuition of staff and identify training needs to support collections-based research projects for relevant Area of Responsibility.	4021D Provide oversight and strategic vision to identify taxonomic/museology gaps for staff within the Area of Responsibility.
LEARNING MODULE ELEMENTS		
Systematic and Taxonomic Principles 4001AB 4001CD	To improve expertise in this field, specific courses can be attended such as the courses offered by DEST: Zoological Nomenclature, Botanical Nomenclature. Course duration is 1 week. http://taxonomytraining.eu/	
Collections in General Scholarship: History of the Discipline and Collections Archival Provenance 4002AB 4003AB 4005AB 4002CD 4003CD 4005CD	The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired by doing the job and by self-education.	
Collections-based Research Project Management Identification Skills Professional Skills	The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired through work experience by doing the job and by self-education. To improve identification expertise specific courses can be attended such as those offered by DEST in the expert-in-training programme. Course duration is from 1-4 weeks training on-the-job.	

<p>Assessment Skills,</p> <p>4004AB 4008AB 4009AB 4010AB 4011AB</p> <p>4004CD 4008CD 4009CD 4010CD 4011CD</p>	<p>http://taxonomytraining.eu/</p>
<p>Keys, Guides and Inventories</p> <p>Publications</p> <p>4006B 4007AB</p> <p>4006CD 4007CD</p>	<p>The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired through work experience by doing the job and by self-education.</p> <p>To improve expertise in this field, specific courses can be attended such as the one offered by DEST in the Modern Taxonomy programme: Basics of Taxonomy, included topics are DELTA, Digital drawing, Scientific illustration, Scientific writing and communication, Scratchpads, a tool to build, publish and share information on the web. Course duration is 2 weeks.</p> <p>http://taxonomytraining.eu/</p>
<p>Funding</p> <p>4012AB</p> <p>4012CD</p>	<p>Title: Introduction to Grant Writing and Fundraising On-line Course Organising institution(s)/organisation(s): Northern States Conservation Center Language: English Content: Cultural Heritage & Natural History Level training: non-academic Target audience: museum staff Geographical range of audience: international Periodicity: on a regular basis Duration: 4 weeks URL: http://www.collectioncare.org/introduction-grant-writing-and-fundraising-line-course</p>
<p>Conferences, Meetings and Workshops</p> <p>Communication with the Media</p> <p>4013AB 4014AB</p> <p>4013CD 4014CD</p>	<p>The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired through work experience by doing the job and by self-education.</p>
<p>Tertiary Education</p>	<p>The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired through work experience by doing the job and by self-education.</p>

<p>Teaching - Tertiary Level</p> <p>Teaching - Extra Mural</p> <p>4015AB 4016B 4017AB</p> <p>4015CD 4016CD 4017CD</p>	
<p>Indicators of Esteem</p> <p>Refereeing</p> <p>Editorship</p> <p>4018B 4019BC 4020B</p> <p>4018CD 4019D 4020CD</p>	<p>The skills, knowledge, attitudes necessary to meet the learning outcomes for these competencies are acquired through work experience by doing the job and by self-education.</p>
<p>In-House Staff Development</p> <p>4021CD</p>	<p>Title: Train-the-Trainer: Methods in collections management training Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum London Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, postgraduates Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: lunch-to-lunch course URL: http://synthesys.cybertaxonomy.africamuseum.be/node/93</p>

Competency Based Curriculum

Unit of Competency	5. Exhibitions, Outreach, Corporate Activities	
Module title	MODULE 5. CONTRIBUTING TO EXHIBITIONS, OUTREACH, CORPORATE ACTIVITIES	
Purpose statement	The purpose of this module is to provide competency based learning in contributing exhibitions, outreach and corporate activities.	
Module descriptor	This module covers the knowledge, skills and attitude required to contribute to the public face of the museum such as contributing expertise to exhibitions, to outreach and corporate activities.	
Level Induction learning	Module elements: 5001 Exhibitions: Content and Development 5002 Exhibitions: Loans 5003 Exhibitions: Specimen Conservation Support 5004 Public Outreach: Citizen Science 5005 Public Outreach: Multimedia 5006 Consultancy and Income Generation 5007 Information Technology 5008 Health & Safety: General. 5009 Health & Safety: Procedural Issues	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job On-line resources	
Recommended assessment method	Written examination Practical exercise	

learners	Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	5001A Provide information and specimens to be used in exhibitions as instructed.	5001B Provide informed suggestions, copy and specimens for exhibitions. Gains experience via secondment to exhibition departments/programmes etc.
	5002A Be familiar with conservation issues for loan material. Pack objects for loan under supervision.	5002B Review facility reports and other associated documents for loan of material relevant to their section. Advise others on the suitability of material for loan. Carry out basic courier duties.
	5003A Provide assistance in installing objects on display.	5003B Provide advice for the display of specimens. Lead installation of objects on display for materials from their area of expertise.
	5004A Give informal talks and tours to small groups of visitors about a collection/specimen.	5004B Give talks, tours or demonstrations about departmental collections, specimens or history, prepare demonstrations to students, public and corporate audiences. Be a recognised spokesperson for a collection in Area of Responsibility.
	5005A Provide information/data for web/multimedia projects.	5005B Produce small multimedia projects, e.g. CDs and webpages.

	Develop and deliver Web pages, Twitter, blog etc.	Contribute material, content, data for large multimedia projects.
	<p>5006A</p> <p>Provide generalized collections support for Institution's consultancy initiatives. E.g processing material/data from commercial environmental surveys.</p>	<p>5006B</p> <p>Provide identifications for consultancy /commercial enquiries to the required level of accuracy and in a timely manner.</p> <p>Provide specialized collections support for Institution's consultancy initiatives.</p> <p>Participate and contribute to generation of commercial income including consultancy.</p> <p>Identify income generation and consultancy opportunities.</p>
	<p>5007A</p> <p>Use a range of general software packages appropriate to the job.</p>	<p>5007B</p> <p>Be an accomplished software user of general software packages.</p> <p>Transfer and store digital information effectively.</p> <p>Be aware of and use specialist software as required for the job.</p>
	<p>5008A</p> <p>Endeavour to maintain a safe and healthy working environment. Recognise hazards (immediate or potential) in their workplace, general-use lab and storage within a designated area.</p> <p>Rectify or report problems to appropriate staff.</p>	<p>5008B</p> <p>Undertake systematic Health and Safety inspections of the workplace, non-specialist labs and storage areas within a designated area in an official capacity.</p> <p>Report findings accurately to departmental Health and Safety officers.</p>
	<p>5009A</p> <p>Understand control of hazardous substances regulations and risk assessment.</p> <p>Prepare simple risk and control of hazardous substances assessments with the guidance of a supervisor.</p> <p>Understand risk phrases and safety labelling.</p>	<p>5009B</p> <p>Actively pursue safety issues.</p> <p>Prepare risk and control of hazardous substances assessments competently.</p>

Level Advanced learning	Module elements: 5001 Exhibitions: Content and Development 5002 Exhibitions: Loans 5003 Exhibitions: Specimen Conservation Support 5004 Public Outreach: Citizen Science 5005 Public Outreach: Multimedia 5006 Consultancy and Income Generation 5007 Information Technology 5008 Health & Safety: General. 5009 Health & Safety: Procedural Issues	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshop On-the-job On-line resources	
Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method for course quality	Feedback from learners via feedback form	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>5001C</p> <p>Be part of the development/design team for an exhibition.</p> <p>Take part in the development of plans including specimen procurement for exhibitions.</p>	<p>5001D</p> <p>Provide expertise and leadership in the development of a large exhibition.</p> <p>Liaise with exhibition teams, external bodies and other Museums on joint exhibitions or external exhibitions.</p> <p>Act as main scientific liaison person on project team for major gallery or exhibition delivery.</p>
	<p>5002C</p> <p>Act for the Department or Institution to ensure criteria for display of specimens are met by borrowing departments and institutions.</p> <p>Be fully competent at carrying out courier duties.</p>	<p>5002D</p> <p>Carry out a range of Registry duties for specimen loan for exhibitions. Coordinate and manage Area of Responsibility/exhibition loans. Negotiate on contracts for specimen loans for exhibitions.</p> <p>Set the criteria and standards for a loan.</p>
	<p>5003C</p> <p>Provide expert assistance and advice from several conservation disciplines.</p> <p>Lead installation of objects on display for materials for all Museum materials.</p>	<p>5003D</p> <p>Assess major conservation undertakings and make recommendations on resources etc. E.g major conservation project to refurbish a museum gallery.</p>
	<p>5004C</p> <p>Represent Area of Responsibility at internal and external meetings or events.</p> <p>Support and contribute to the organisation and delivery of public events.</p>	<p>5004D</p> <p>Speak on behalf of the Museum at external meetings.</p> <p>Organise major internal/external public events such as fossil festivals etc</p> <p>Be a recognised spokesperson on collections management issues</p>

	<p>Develop new and innovative approaches to outreach activities.</p> <p>Be a recognised spokesperson for collections management and all collections in Area of Responsibility.</p>	and Area of Responsibility.
	<p>5005C</p> <p>Design complex web applications in liaison with IT and interactive media experts.</p>	<p>5005D</p> <p>Initiate and lead large collections-relevant multimedia projects.</p> <p>Manage departmental collections management web presence.</p>
	<p>5006C</p> <p>Lead curation consultancy teams.</p> <p>Help develop new consultancy projects.</p> <p>Consistently contribute to consultancy activity, e.g. enquiries, collections assessments for other Institutions etc.</p> <p>Actively seek opportunities for income generation and consultancy.</p> <p>Act as expert witness e.g giving forensic evidence in criminal prosecutions.</p>	<p>5006D</p> <p>Routinely develop and promote new collections consultancy initiatives.</p> <p>Mount a successful campaign through corporate sponsorship and philanthropy.</p> <p>Be focal point for major national and international consultancy expertise.</p> <p>Collaborate with Development to seek and generate significant fund-raising opportunities.</p>
	<p>5007C</p> <p>Be involved in research projects because of ability to manipulate data from a variety of digital sources e.g. Biogeomancer, GIS, web sources, electronic environmental monitoring systems.</p> <p>Provide support and advice on specialist software applications.</p> <p>Be aware of International developments in data standards, attends relevant meetings, e.g. GBIF, TDWG, etc.</p>	<p>5007D</p> <p>Develop new software, database applications that take advantage of new technology.</p> <p>Contribute to International developments in data standards, attends relevant meetings, e.g. GBIF, TDWG, etc.</p> <p>Ensure compliance with International developments in data standards, attends relevant meetings, e.g. GBIF, TDWG, etc.</p>

	<p>5008C</p> <p>Be qualified to carry out official Health and Safety inspections of specialist labs in their Area of Responsibility.</p> <p>Act upon Health and Safety inspection team's reports on health and safety issues in an effective and timely manner so as to mitigate risk of injury or damage.</p> <p>Ensure that health and safety regulations are complied with across their Area of Responsibility.</p>	<p>5008D</p> <p>Advise senior management and health and safety officers on Area of Responsibility and related laboratories on Health and Safety issues specific to those areas.</p> <p>Formulate operational procedure.</p>
	<p>5009C</p> <p>Take a lead role in providing a safe working environment.</p> <p>Guide members of staff with writing risk and COSHH assessment.</p> <p>Manage the updating of assessments.</p> <p>Alert staff to changes in legislation, ensure appropriate safety labelling is in use for all chemicals.</p>	<p>5009D</p> <p>Ensure that all collections management methods within the Area of Responsibility are compliant and have a Risk Assessment and COSHH statements and are accessible for inspection.</p> <p>Make sure that collections management practices in use in the Area of Responsibility comply with all legislation.</p>

LEARNING MODULE ELEMENTS

<p>Exhibitions: Content and Development</p> <p>Exhibitions: Loans</p> <p>Exhibitions : Specimen Conservation Support</p> <p>Health & Safety: General</p>	<p>Title: Conservation of Natural History Materials</p> <p>Organising institution(s)/organisation(s): Natural History Museum London</p> <p>Language: English</p> <p>Content: Natural History focused (general, botanical, zoological, taxidermy & skins, molecular, fossils, rocks & minerals, ethnographic</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, conservators</p>
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<p>Health & Safety: Procedural Issues</p> <p>5001AB 5002AB 5003AB 5008AB 5009AB</p> <p>5001CD 5002CD 5003CD 5008CD 5009CD</p>	<p>Geographical range of audience: international</p> <p>Periodicity: on demand</p> <p>Duration: 5 days</p> <p>URL: -</p>
<p>Exhibitions: Content and Development</p> <p>Exhibitions: Loans</p> <p>Exhibitions : Specimen Conservation Support</p> <p>Health & Safety: General</p> <p>Health & Safety: Procedural Issues</p> <p>5001AB 5002AB 5003AB 5008AB 5009AB</p> <p>5001CD 5002CD 5003CD 5008CD 5009CD</p>	<p>Title: Behoud en beheer van collecties (NL) / Gestion des collections (FR)</p> <p>Organising institution(s)/organisation(s): Royal Belgian Institute of Natural Sciences</p> <p>Language: Dutch/French</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, molecular, fossils, rocks and minerals, metal & paintings)</p> <p>Level training: non- academic</p> <p>Target audience: technicians, collections managers, curators</p> <p>Geographical range of audience: national, mainly in-house however also collection collaborators of other institutes were invited</p> <p>Periodicity: regularly organised until 2011, on demand</p> <p>Duration: 2-3 days depending on educational level of participants</p> <p>URL: -</p>
<p>Exhibitions: Content and Development</p> <p>Exhibitions: Loans</p> <p>Exhibitions : Specimen Conservation Support</p> <p>Health & Safety: General</p> <p>Health & Safety: Procedural Issues</p> <p>5001AB 5002AB 5003AB 5008AB 5009AB</p> <p>5001CD 5002CD 5003CD 5008CD 5009CD</p>	<p>Title: Collection management</p> <p>Organising institution(s)/organisation(s): Hungarian Natural History Museum</p> <p>Language: Hungarian</p> <p>Content: Natural History focused (general, botanical, zoological, fluid-preserved, dried, entomological, taxidermy & skins, fossils, rocks & minerals)</p> <p>Level training: non-academic</p> <p>Target audience: technicians</p> <p>Geographical range of audience: national</p> <p>Periodicity: on demand</p> <p>Duration: 5 weeks</p> <p>URL: -</p>

<p>Exhibitions: Content and Development</p> <p>Exhibitions: Loans</p> <p>Exhibitions : Specimen Conservation Support</p> <p>Health & Safety: General</p> <p>Health & Safety: Procedural Issues</p> <p>5001AB 5002AB 5003AB 5008AB 5009AB</p> <p>5001CD 5002CD 5003CD 5008CD 5009CD</p>	<p>Title: SYNTHESYS Advanced Training in Collections Management. Molecular collections management and linkage between biological specimen repositories and molecular sequence databases</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Museo Nacional de Ciencias Naturales Madrid</p> <p>Language: English</p> <p>Content: Natural History focused (molecular collections)</p> <p>Level training: non-academic</p> <p>Target audience: collections managers, curators, graduates (MSc, PhD), postgraduates</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 2 days</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/103</p>
<p>Public Outreach: Citizen Science</p> <p>5004AB</p> <p>5004CD</p>	<p>Title: Train-the-Trainer: Methods in collections management training</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum London</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, curators, postgraduates</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: lunch-to-lunch course</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/93</p>
<p>Information Technology</p> <p>5007AB</p> <p>5007CD</p>	<p>Title: Information Networks (digitization, IT and related activities for database and collections management)</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Royal Museum for Central Africa</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, postgraduates, IT specialists dealing with digital collection management</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 3 days</p>

<p>Information Technology 5007 AB</p>	<p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/306?107529035=1</p> <p>Title: E-Learning Workshop on Data Recording for Technicians in Natural History Collections Organising institution(s)/organisation(s): GBIF.ES Language: Spanish Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, professional development for museum staff Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 30 hours in 2 weeks URL: http://www.gbif.es/formaciondetalles.php?IDForm=127</p>
ON-LINE LEARNING RESOURCES	
<p>Exhibitions: Content and Development Exhibitions: Loans Exhibitions : Specimen Conservation Support 5001AB 5002AB 5003AB 5001CD 5002CD 5003CD</p>	<p><i>On-line courses organised by the Northern States Conservation Center:</i> Design and Construction of Exhibit Mounts On-line Course http://www.collectioncare.org/design-and-construction-exhibit-mounts-line-course</p> <p>Traveling Exhibitions On-line Course http://www.collectioncare.org/traveling-exhibitions-line-course</p> <p><i>Complete course list can found at:</i> http://www.collectioncare.org/course-list courses are 4 weeks on-line – average learning time is 10 hours/week</p>
<p>Public Outreach: Citizen Science Public Outreach: Multimedia Consultancy and Income Generation 5004AB 5005AB 5006AB 5004CD 5005CD 5006CD</p>	<p>Skills, knowledge and attitudes for these learning elements are developed by doing the job or are acquired through self-education. Communication skills are needed to do presentations, giving talks.</p>

Competency Based Curriculum

Unit of Competency	6. General Management	
Module title	MODULE 6. MANAGING RESOURCES AND PEOPLE	
Purpose statement	The purpose of this module is to provide competency based learning in general management of resources and people.	
Module descriptor	This module covers the knowledge, skills and attitude required to manage resources and people, how management of those resources benefits the museum and how to develop and manage people responsible for.	
Level Induction learning	Module elements: 6001 Resource Management 6002 People Management: Team Working 6003 People Management: Managing Performance 6004 People Management: Recruitment and Promotion Selection 6005 People Management: Influencing Skills 6006 Problem Solving and Decision Making 6007 Change Management (Flexibility) 6008 Communication 6009 Meetings 6012 Training and Mentoring 6013 Record Keeping	Duration: see course descriptions below
Methodologies	Lectures Discussion groups Workshops On-the-job	

Recommended assessment method learners	Written examination Practical exercise Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	6001A Use available resources in an effective way, avoiding waste and inefficiency.	6001B Understand the financial implications of uses of resources.
	6002A Be a positive, active and flexible member of the team. Make time for team members and recognise when staff are under pressure.	6002B Lead small project teams as required (staff or volunteers). Ensure all team members feel appreciated and valued. Help integrate newcomers into the team.
	6003AB Take ownership of own agreed work programme and fulfils commitments. Work to deadlines, is well organised and able to cope with a number of tasks. Be punctual, i.e. attends meetings on time.	
	-	6004B Organise Area of Responsibility/Departmental induction for new employees.
	6005A Develop good working relationships with colleagues.	6005B Build relationships within team and between teams. Make persuasive arguments/presentations.

	<p>6006A</p> <p>Identify problems, able to determine appropriate action and refer to line management when appropriate.</p>	<p>6006B</p> <p>Seek to solve issues and problems that arise in their work area and. Recommend solutions to line management.</p>
	<p>6007A</p> <p>Take on new roles and tasks and is prepared to use and learn new methods.</p>	<p>6007B</p> <p>Assess and is open to alternative work practices. React constructively to change and recognises that this may require different responses.</p>
	-	<p>6008B</p> <p>Regularly provide and receive feedback.</p>
	-	<p>6009B</p> <p>Actively participate in meetings, e.g. contribute to the aims of the meeting. Minute taking.</p>
	-	-
	-	-
	-	<p>6012B</p> <p>Train new colleagues, visitors and volunteers, e.g. induction and procedures.</p>
	<p>6013A</p> <p>Keep records and paperwork tidy and correctly filed.</p>	<p>6013B</p> <p>Maintain record keeping systems for designated Area of Responsibility.</p>

<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>6001 Resource Management</p> <p>6002 People Management: Team Working</p> <p>6003 People Management: Managing Performance</p> <p>6004 People Management: Recruitment and Promotion Selection</p> <p>6005 People Management: Influencing Skills</p> <p>6006 Problem Solving and Decision Making</p> <p>6007 Change Management (Flexibility)</p> <p>6008 Communication</p> <p>6009 Meetings</p> <p>6010 Strategic Analysis and Planning</p> <p>6011 Learning and Development</p> <p>6012 Training and Mentoring</p> <p>6013 Record Keeping</p>	<p>Duration:</p> <p>see course descriptions below</p>
<p>Methodologies</p>	<p>Lectures</p> <p>Discussion groups</p> <p>Workshop</p> <p>On-the-job</p> <p>On-line resources</p>	
<p>Recommended assessment method learners</p>	<p>Written examination</p> <p>Practical exercise</p> <p>Interview</p>	
<p>Assessment method for course quality</p>	<p>Feedback from learners via feedback form</p>	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>6001C</p> <p>Understand the procurement process within the Museum – favoured supplier and associated rules.</p> <p>Assess and bid for resources for Area of Responsibility in accordance with Departmental strategy and objectives.</p> <p>Manage allocated resources effectively.</p>	<p>6001D</p> <p>Bid for funding.</p> <p>Undertake the tendering process within financial regulations.</p> <p>Plan, forecast and monitors expenditure against budget.</p> <p>Contribute to succession planning for collections management staff within Collections area and Department.</p> <p>Manage staff resources.</p>
	<p>6002C</p> <p>Be Team manager, competent in line management.</p> <p>To motivate and manage teams of volunteers.</p> <p>Have good interpersonal skills.</p> <p>Empower team members to achieve objectives and takes responsibility for team members' actions and errors.</p>	<p>6002D</p> <p>Develop and lead team planning.</p> <p>Have appropriate Project Management skills.</p> <p>Display leadership skills.</p> <p>Understand and applies the legislative framework for employment.</p> <p>Be responsible for meetings that cover all collections</p>
	<p>6003C</p> <p>Manage time and priorities of designated team by setting appropriate objectives and deadlines.</p> <p>Be aware of the financial costs of and constraints on actions.</p> <p>Develop staff to achieve their potential in their role.</p> <p>Identify and resolve performance problems.</p> <p>Assess, recognise and reward performance.</p>	<p>6003D</p> <p>Have a complete understanding of institutional aspirations, on-going projects and available resources.</p> <p>Develop co-ordinated action plans and sets performance standards for the Area of Responsibility.</p> <p>Delegate where appropriate.</p>

	<p>Manage absence using the Museum's Absence Policy.</p> <p>Identify and manage flexible working arrangement for staff whilst maintaining core business activities.</p>	
	<p>6004C</p> <p>Able to implement confidently the Museum's recruitment and selection procedures.</p> <p>Have effective interviewing skills e.g. understands legal framework and regulations such as Equal Opportunities.</p> <p>Assess staff for promotion.</p>	<p>6004D</p> <p>Contribute to Departmental strategic succession planning.</p> <p>Chair recruitment panel.</p> <p>Make recommendations for promotion from within the Area of Responsibility.</p>
	<p>6005C</p> <p>Negotiate with Area of Responsibility management on posts, resources, etc.</p> <p>Resolve conflicts.</p> <p>Understand and implements motivational techniques.</p>	<p>6005D</p> <p>Negotiate across Departments on joint projects.</p> <p>Lead team but may not necessarily have direct line management control.</p> <p>Negotiate with senior management on posts, resources, etc.</p>
	<p>6006C</p> <p>Carry out detailed analysis to identify best solutions to problems.</p>	<p>6006D</p> <p>Take decisions though there may be no guiding precedent or where information is incomplete or unclear, assessing risks effectively.</p> <p>Use personal experience to quickly and accurately identify causes of problems and arrive at possible solutions to test.</p> <p>Carry out risk analysis for Area of Responsibility and /or Department on collection management issues.</p> <p>Monitor the effect of decisions and takes ownership of actions.</p>

	<p>6007C</p> <p>Endeavour to incorporate change to improve working practices and productivity, and communicates this to designated team/staff.</p> <p>Help others cope with change.</p>	<p>6007D</p> <p>Continually seek new ideas and implements improvements.</p> <p>Lead and communicate change.</p>
	<p>6008C</p> <p>Run clear team briefings using appropriate communication methods.</p>	<p>6008D</p> <p>Run clear briefings and talk to senior management using appropriate communication methods.</p>
	<p>6009C</p> <p>Arrange and chair meetings within the Area of Responsibility or designated team.</p>	<p>6009D</p> <p>Arrange and chair meetings at Area of Responsibility/Departmental/Institutional level and externally e.g. clear agenda and objectives.</p>
	<p>6010C</p> <p>Set and balance priorities within Area of Responsibility.</p>	<p>6010D</p> <p>Interpret relevant Museum and Departmental strategic goals and implements into viable Area of Responsibility objectives.</p>
	<p>6011C</p> <p>Identify the training needs within Area of Responsibility and implements appropriate training, both 'in job' and formal courses.</p>	<p>6011D</p> <p>Set clear boundaries for responsibility and action, ensure that individual development is linked to Collection Area needs and that staff are developed to meet future as well as immediate needs.</p> <p>Promote a culture of excellence, creative thinking and consideration for what is critical for long-term success.</p>
	<p>6012CD</p> <p>Deliver specialist skills training in area of expertise e.g. collections management, identification, valuation, specimen preparation, x-ray, etc. to colleagues and national and international visitors and museum professionals.</p>	
	<p>6013C</p> <p>Review records for designated Area of Responsibility and ensures they are up to date and maintained at the correct standard.</p>	<p>6013D</p> <p>Review record keeping in Area of Responsibility record keeping. Ensure systems are effective, efficient and information can be retrieved effectively.</p>

	Make decisions about archiving of records for Area of Responsibility.	Develop Collection Area archive policy for curation records.
LEARNING MODULE ELEMENTS		
Learning and Development Training and Mentoring 6012B 6011CD 6012CD	Title: Train-the-Trainer: Methods in collections management training Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum London Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, postgraduates Geographical range of audience: European Periodicity: one time in the framework of a special occasion Duration: lunch-to-lunch course URL: http://synthesys.cybertaxonomy.africamuseum.be/node/93	
Record Keeping 6013AB	Title: E-Learning Workshop on Data Recording for Technicians in Natural History Collections Organising institution(s)/organisation(s): GBIF.ES Language: Spanish Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators, professional development for museum staff Geographical range of audience: international Periodicity: on a regular basis (yearly, 2 times/year etc.) Duration: 30 hours in 2 weeks URL: http://www.gbif.es/formaciondetalles.php?IDForm=127	
Record Keeping 6013AB 6013CD	Title: Access to collections Organising institution(s)/organisation(s): SYNTHESYS & Natural History Museum Budapest Language: English Content: Natural History focused (general) Level training: non-academic Target audience: technicians, collections managers, curators Geographical range of audience: European	

	<p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: lunch-to-lunch course</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/92</p>
<p>Record Keeping</p> <p>6013AB</p> <p>6013CD</p>	<p>Title: Information Networks (digitization, IT and related activities for database and collections management)</p> <p>Organising institution(s)/organisation(s): SYNTHESYS & Royal Museum for Central Africa</p> <p>Language: English</p> <p>Content: Natural History focused (general)</p> <p>Level training: non-academic</p> <p>Target audience: technicians, collections managers, postgraduates, IT specialists dealing with digital collection management</p> <p>Geographical range of audience: European</p> <p>Periodicity: one time in the framework of a special occasion</p> <p>Duration: 3 days</p> <p>URL: http://synthesys.cybertaxonomy.africamuseum.be/node/306?107529035=1</p>
ON-LINE LEARNING RESOURCES	
<p>Resource Management</p> <p>People Management: Team Working</p> <p>People Management: Managing Performance</p> <p>People Management: Recruitment and Promotion Selection</p> <p>People Management: Influencing Skills</p> <p>Problem Solving and Decision Making</p> <p>Change Management (Flexibility)</p> <p>6001CD 6002CD 6003CD 6004CD</p> <p>6005CD 6006CD 6007CD</p>	<p>Title: Buy-In: Getting All of the Staff to Support Preservation On-line Short Course</p> <p>Organising institution(s)/organisation(s): Northern States Conservation Center</p> <p>Language: English</p> <p>Content: Cultural Heritage & Natural History</p> <p>Level training: non-academic</p> <p>Target audience: museum staff</p> <p>Geographical range of audience: international</p> <p>Periodicity: on a regular basis</p> <p>Duration: 4 days</p> <p>URL: http://www.collectioncare.org/buy-getting-all-staff-support-preservation-line-short-course</p>
<p>Resource Management</p>	<p>Title: Introduction to Grant Writing and Fundraising On-line Course</p> <p>Organising institution(s)/organisation(s): Northern States Conservation Center</p>

<p>6001D</p>	<p>Language: English Content: Cultural Heritage & Natural History Level training: non-academic Target audience: museum staff Geographical range of audience: international Periodicity: on a regular basis Duration: 4 weeks URL: http://www.collectioncare.org/introduction-grant-writing-and-fundraising-line-course</p>
<p>Resource Management People Management: Team Working People Management: Managing Performance People Management: Recruitment and Promotion Selection People Management: Influencing Skills Problem Solving and Decision Making Change Management (Flexibility) Strategic Analysis and Planning 6001CD 6002CD 6003CD 6004CD 6005CD 6006CD 6007CD 6010CD</p>	<p>Title: Museum Management On-line Course Organising institution(s)/organisation(s): Northern States Conservation Center Language: English Content: Cultural Heritage & Natural History Level training: non-academic Target audience: museum staff Geographical range of audience: international Periodicity: on a regular basis Duration: 4 weeks URL: http://www.collectioncare.org/introduction-grant-writing-and-fundraising-line-course</p>
<p>GAPS / REMARKS</p>	
<p>Resource Management People Management: Team Working People Management: Managing Performance People Management: Recruitment and Promotion Selection</p>	<p>Master courses (Art Gallery & Museum Studies, Museum Studies ...) include in their programme management, communication etc. At a non-academic level some on-line courses were found but they are for level C and D.</p> <p>Gaps in learning resources exist for level A and B. However, some of the skills, knowledge, attitudes necessary to meet the learning outcomes for level A and B of this module are acquired by doing the job. The same holds true for some of the management and communication competencies needed at level C and D.</p>

<p>People Management: Influencing Skills</p> <p>Change Management (Flexibility)</p> <p>Communication</p> <p>Meetings</p> <p>6001AB 6002AB 6003AB 6004B</p> <p>6005AB 6007AB 6008B 6009B</p> <p>6008CD 6009CD</p>	

Competency Based Curriculum

Unit of Competency	7. Human Remains	
Module title	MODULE 7. DEALING WITH HUMAN REMAINS	
Purpose statement	The purpose of this module is to provide competency based learning in policies and procedures dealing with Human Remains.	
Module descriptor	This module covers the knowledge, skills and attitude required to have expertise in policies and procedures dealing with repatriation of Human Remains.	
Level Induction learning	Module elements: 7001 Human Remains: General 7002 Human Remains: Physical Return 7003 Human Remains: Community Visits and Ceremonies	Duration: Self-paced
Methodologies	Literature study On-the-job	
Recommended assessment method learners	Interview	
Assessment method course quality	Feedback from learners via feedback form	
LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	7001A Understand the legal framework and the collections management system/databases	7001B Contribute to internal consultations on human remains issues. Be fully conversant with policy and procedures.

	<p>guidance documents.</p> <p>Understand the museum policy & procedures for human remains.</p>	
	<p>7002A</p> <p>Understand the cultural sensibilities of the community involved.</p> <p>Understand the procedures needed to process a return and the international and local regulations for transporting human remains.</p>	<p>7002B</p> <p>Liaise with various authorities and shipping agents to ensure full compliance with regulations.</p>
	<p>7003A</p> <p>Understand the cultural importance of ceremonies.</p> <p>Deal with communities in a polite and respectful manner.</p>	<p>7003B</p> <p>Supervise ceremonies and visits within the agreed parameters.</p>
<p>Level</p> <p>Advanced learning</p>	<p>Module elements:</p> <p>7001 Human Remains: General</p> <p>7002 Human Remains: Physical Return</p> <p>7003 Human Remains: Community Visits and Ceremonies</p>	<p>Duration:</p> <p>Self-paced</p>
<p>Methodologies</p>	<p>Literature study</p> <p>On-the-job</p>	
<p>Recommended assessment method learners</p>	<p>Interview</p>	
<p>Assessment method for course quality</p>	<p>Feedback from learners via feedback form</p>	

LEARNING OUTCOMES	Upon completion of the module, the learner can demonstrate to an appropriate standard the ability to:	
	<p>7001C</p> <p>Contribute to procedures development.</p> <p>Have day to day role in ensuring compliance through guidance on both Human remains specific issues on the collections management system/databases and HTA regulations.</p>	<p>7001D</p> <p>Develop policy & procedures for human remains.</p> <p>Have input into the museums strategy on human remains issues.</p> <p>Undertake the museum’s response to external consultations.</p> <p>Be consulted by external institutions on human remains issues.</p> <p>Sit on external advisory bodies.</p>
	<p>7002C</p> <p>Plan and organise the return.</p>	<p>7002D</p> <p>Work with all stakeholders on the process of return and agree with the community on all aspects of the return.</p>
	<p>7003C</p> <p>Plan and organise visits.</p> <p>Have input into the parameters agreed for any ceremony.</p>	<p>7003D</p> <p>Agree the type and extent of the visit or ceremony.</p> <p>Develop suitable policy & procedures.</p>
LEARNING MODULE ELEMENTS		
<p>Human Remains: General</p> <p>Human Remains: Physical Return</p> <p>Human Remains: Community Visits and Ceremonies</p> <p>7001AB 7002AB 7003AB</p> <p>7001CD 7002CD 7003CD</p>	<p>Information is set out in detail in the following guidance on the care of Human Remains:</p> <p>Guidance for the Care of Human Remains in Museums http://www.britishmuseum.org/pdf/DCMS%20Guide.pdf</p> <p>Guidelines for the care of human remains in Scottish museum collections http://www.museumsgalleriesscotland.org.uk/research-and-resources/resources/publications/publication/378/guidelines-for-the-care-of-human-remains-in-scottish-museum-collections#sthash.bqlpk7EU.dpuf</p>	

Recommendations for the Care of Human Remains in Museums and Collections

http://www.museumbund.de/fileadmin/geschaefts/dokumente/Leitfaeden_und_anderes/2013_Recommendations_for_the_Care_of_Human_Remains.pdf

The Routledge Handbook of Archaeological Human Remains and Legislation: An International Guide to Laws and Practice in the Excavation and Treatment of Archaeological Human Remains. Nicholas Marquez-Grant, Linda Fibiger. Taylor & Francis, 2011 - 800 p.

ANNEX: The 7 divisions of the Competency Based Curriculum

Competency Based Curriculum Division	Subdivision
1. Collection Management, Conservation and Care	1.1 Collections Growth & Development 1.2 Collections Policies and Procedures 1.3 Collections Organisation 1.4 Risk Management 1.5 Collections Care and Conservation
2. Access to Collections	
3. Digital Curation	
4. Scholarship	
5. Exhibitions, Outreach, Corporate Activities	
6. General Management	
7. Human Remains	

The first division of the core curriculum is subdivided into 5 subdivisions.
Numbering corresponds to numbering used in the Collections Management Competency Framework.

CM = collection management core competency; **C** = conservation core competency; **D** = databaser/digitizer core competency

First Competency Division

1. Collections Management, Conservation and Care

Competency Based Curriculum Subdivision	Topic	
1.1 Collections Growth & Development	1.1.i. Collections development strategy: Assessment	CM
	1.1.ii. Collections development strategy: Development	CM, D
	1.1.iii. Growth of the collections	CM
	1.1.iv. Fieldwork: Planning and Organization	
	1.1.v. Fieldwork: Practical Experience	
	1.1.vi. Auctions, trade shows and specialist fairs	
1.2 Collections Policies and Procedures	1.2.i. Collection policies and procedures: general	CM, C, D
	1.2.ii. General policies and procedures: Due Diligence, ABS <i>etc.</i>	CM, C
	1.2.iii. General policies and procedures: Documentation	CM, C
1.3 Collections Organisation	1.3.i. Underlying basis for the organisation	CM
	1.3.ii. Physical organisation and space planning	CM
	1.3.iii. Collection Maintenance	CM, C
1.4 Risk Management	1.4.i. Collections: Risk Management.	CM, C
	1.4.ii. Collections: Environmental Monitoring	C
	1.4.iii. Integrated Pest Management	CM, C
	1.4.iv. Collections Security	CM, C
	1.4.v. Disaster Planning: General	CM, C
	1.4.vi. Disaster Planning: Practical procedures	C
1.5 Collections Care and Conservation	1.5.i. Collection Condition Surveys	CM, C
	1.5.ii. Condition Report on a Specimen	C
	1.5.iii. Conservation Fieldwork	

	1.5.iv. Conservation Project Planning	C
	1.5.v. Collections Care and Conservation: Practical Application	C
	1.5.vi. Collections Care and Conservation: Specimen Preparation	
	1.5.vii. Collections Care and Conservation: Preventive Conservation - Rehousing	CM, C
	1.5.viii. Collections Care and Conservation: Preventive Conservation - Cleaning	C
	1.5.ix. Collections Care and Conservation: Replication	
	1.5.x. Collection's Care and Conservation: New approaches and development of existing methods - Techniques	C
	1.5.xi. Collection's Care and Conservation: New approaches and development of existing methods – Materials	

Second Competency Division**2. Access to collections**

Competency Based Curriculum Division	Topic	
2. Access to collections	2.i. General (Enquiries, Loans, Visitors <i>etc.</i>)	CM
	2.ii. User Needs	
	2.iii. Research Loans	CM
	2.iv. Destructive and Invasive Sampling	
	2.v. Visitors to the Collections	CM, C
	2.vi. Visitors: Security of Collections	CM
	2.vii. Enquiries - Written	CM
	2.viii. Enquiries- Verbal	CM
	2.ix. Enquiry Management	

Third Competency Division

3. Digital Curation

Competency Based Curriculum Division	Topic	
3. Digital Curation	3.i. Data entry	CM,C, D
	3.ii. Query and Reporting	CM, D
	3.iii. Data Validation and Enhancement	CM, D
	3.iv. Mass Digitisation: Projects	D
	3.v. Mass Digitisation: Digital Imaging	D
	3.vi. Workflows and Process management	D
	3.vii. Manage Collections Data: Quality Control and Assurance	CM, D
	3.viii. Manage Collections Data: Policies	CM, D
	3.ix. Database Management: Technical Interface	CM, D
	3.x. Database Management: Advanced Database Management	D
	3.xi. Collections Management System: Development	D
	3.xii. Collections Management System: Registry Management	D
	3.xiii. Collections Management System: Training and Support	D

Fourth Competency Division

4. Scholarship

Competency Based Curriculum Division	Topic	
4. Scholarship	4.i. Scholarship: Systematic and Taxonomic Principles	CM
	4.ii. Scholarship:General	CM
	4.iii. Scholarship: History of the Discipline and Collections	
	4.iv. Scholarship: Collections-based Research	
	4.v. Scholarship: Keys, Guides and Inventories	
	4.vi. Scholarship: Publications.	
	4.vii. Scholarship: Project Management	
	4.viii. Scholarship: Identification skills	CM
	4.ix. Scholarship: Professional skills	
	4.x. Scholarship: Assessment Skills	
	4.xi. Scholarship: Funding	
	4.xii. Scholarship: Conferences, Meetings and Workshops	
	4.xiii. Scholarship: Communication with the Media.	
	4.xiv. Scholarship: Tertiary Education	
	4.xv. Scholarship: Teaching - Tertiary Level	
	4.xvi. Scholarship: Teaching - Extra Mural	
	4.xvii. Scholarship: Indicators of Esteem	
	4.xviii. Scholarship: Refereeing	
	4.xix. Scholarship: Editorship	
	4.xx. Scholarship: In-House Staff Development	

Fifth Competency Division**5. Exhibitions, Outreach, Corporate Activities**

Competency Based Curriculum Division	Topic	
5. Exhibitions, Outreach, Corporate Activities	5.i. Exhibitions: Content and Development	
	5.ii. Exhibitions: Loans	
	5.iii. Exhibitions: Specimen Conservation Support	
	5.iv. Public Outreach: Citizen Science	CM, C
	5.v. Public Outreach: Multimedia	
	5.vi. Consultancy and Income Generation	
	5.vii. Information Technology	CM, C, D
	5.viii. Health & Safety: General	CM, C, D
	5.ix. Health & Safety: Procedural Issues	CM, C

Sixth Competency Division

6. General Management

Competency Based Curriculum Division	Topic	
6. General Management	6.i. Resource Management	CM, C, D
	6.ii. People Management: Team Working	CM, C, D
	6.iii. People Management: Managing Performance	CM, C, D
	6.iv. People Management: Recruitment and Promotion Selection	
	6.v. People Management: Influencing skills	CM, C, D
	6.vi. Problem Solving and Decision Making	CM, C, D
	6.vii. Change Management (Flexibility)	CM, C, D
	6.viii. Communication	
	6.ix. Meetings	
	6.x. Strategic Analysis and Planning	
	6.xi. Learning and Development	
	6.xii. Training and Mentoring	
	6.xiii. Record Keeping	CM, C, D

Seventh Competency Division**7. Human Remains**

Competency Based Curriculum Division	Topic	
7. Human Remains	7.i. Human Remains: General	
	7.ii. Human Remains: Physical Return	
	7.iii. Human Remains: Community Visits and Ceremonie	