

2.00 credits

16.0 h

Q1

Language :	French
Place of the course	Autre site
Main themes	Diagnosis of Materials and Structural Damage
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ol style="list-style-type: none"> 1 Recognize a specific pathology related to historic and modern construction materials, and structures. 2 Be capable of proposing preliminary studies aimed at assessing the physico-chemical characteristics of materials. 3 Develop a diagnostic survey map. 4 Identify degradation factors. 5 Propose specific conservation measures for materials. 6 Analyze a specific issue of deformation or instability in an ancient structure. 7 Offer curative approaches to guarantee the structural integrity of the building...
Evaluation methods	Oral examination during the January session (or August, in case of failure)
Teaching methods	Lectures, visits
Content	<ul style="list-style-type: none"> • Study of the influence of climate on material degradation. • Characterization of the physico-mechanical behavior of historic materials. • Specific pathologies of materials and structures in historic buildings (bricks, wood, stone, metals, plasters, and mortars). • Case studies.
Inline resources	Course materials are made available as the course progresses.
Bibliography	Conserving buildings. Martin E. Weaver. John Wiley & Sons, Inc. (ISBN : 0-471-50945-0), Restauration et réutilisation des monuments anciens. Georges Duval. Editions Mardaga (ISBN : 2-87009-428-0), Techniques de l'architecture ancienne. Yves-Marie Froidevaux. Editions Mardaga (ISBN : 2-87009-774-3), Préserver les objets de son patrimoine. Editions Mardaga (ISBN : 2-87009-766-2), La pierre et sa conservation. Editions du Patrimoine (ISBN : 2-85822-250-9), Les ennemis naturels du bois d'oeuvre. André Leclercq & Edgard Seutin. Les Presses Agronomiques de Gembloux (ISBN : 2-87016-034), Sens et renaissances du patrimoine architectural. Benjamin Mouton. Editions des Cendres. Cité de l'Architecture et du Patrimoine. (ISBN : 978-2-86742-278-2)
Faculty or entity in charge	FIAL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Advanced Master in Heritage Conservation and Restoration	PATR2MC	2		