Sistema di gestione per la Qualità UNI EN ISO 9001:2015	Modulo lavoro	Pagina 1 di 3	I.I.S.S. "E VANONI" MENAGGIO
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ANNO SCOLASTICO	2022-2023
CLASSE	4G
MATERIA	LINGUA E CIVILTÀ INGLESE
DOCENTE	Amalia Gagliardi

ESP CONTENTS

BUILDING INTERVENTIONS ON STRUCTURES

- 1. Protecting historical heritage of buildings: preservation, rehabilitation, restoration, reconstruction
- 2. Restoration risks
- 3. Listed buildings: grade I (buildings of exceptional interest), grade II* (buildings of more than special interest), grade II (buildings of special interest)
- 4. Renovation: principles and risks
- 5. Hiring a professional or carrying out a DIY project
- 6. Energy and structural retrofitting
- 7. Adaptive reuse
- 8. Research: adaptive reuse examples throughout the world
- 9. Urban renewal

BUILDING INSTALLATIONS

- Electrical circuits: scientific assumptions; the atom: protons, electrons, neutrons. The role of a generator and resistance; positive and negative poles and dynamics in a circuit. Voltage (volt), intensity of current (ampere), resistance (ohm). Ohm's law formulas
- 2. Utility pole, meter, main electrical panel, breaker, wiring circuits, sockets, switches
- 3. Heating systems:
 - Hydronic systems
 - Biomass systems
 - Portable heaters
 - Heat pumps (air-source heat pumps, geothermal heat pumps)
- 4. Ventilation:
 - Natural ventilation
 - Spot ventilation
 - Whole-house ventilation
- 5. Plumbing systems:
 - Meter
 - Service line
 - Canals of water supplies
- 6. Drain-waste-vent system

7. Air-conditioning systems

HISTORY OF ARCHITECTURE

- Prehistoric architecture: megalithic structures.
 - Case study: Stonehenge and Uffington White Horse
- Greek architecture:
 - Doric, Ionic and Corinthian columns
 - Entablature
 - Pediment and tympanum
 - Greek temple floor plan: colonnade, stepped podium, the cella
 - Case study: the Parthenon
- Roman architecture:
 - The invention of concrete
 - Building types: aqueducts, fountains, wells, bridges, baths, roads, amphitheatres, basilicas, triumphal arches
 - Building elements: round arches, barrel/tunnel vault, the dome
 - Case study: the Pantheon
- Romanesque architecture:
 - Features of churches in Southern Europe: wide and heavy walls, small and scarce windows, modest height, horizontal lines, absence of decoration, poor masonry materials, central oculus on the façade, gable roof, central, taller section representing the main nave sided by shorter sections at the two edges identifying the aisles, bell tower, transept, apse, blind arcading, alternance of solid and hollow sections, round arches and barrel vaults
 - Features of churches in Britain: wide and heavy walls, absence of decoration, small and scarce windows, twin squared towers on the façade, shorter crossing tower surmounting the intersecting transept, blind arcading, alternance of solid and hollow sections
- Gothic architecture:
 - Features of the Gothic style: verticality/elevation, thin walls, colonettes, pointed arches and ribbed vaults, large stained glass windows, rose window, recessed portal, flying buttresses, pinnacles and spires, triforium, clerestory, stone carving works and rich decoration
 - Evolution steps of Gothic style in Britain: Early English (or First Pointed) Decorated Gothic (or Second Pointed) – Perpendicular style (or Third Pointed)

LANGUAGE SKILLS

- Graph customising: bar chart, line chart, area graph, scatter plot, pie chart, pictograph, column chart, bubble chart, Gauge chart
- Speaking production: analysing and commenting on graphs and charts
- Writing production: summarising technical essays
- Reading comprehension: technical and general texts

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EVENTUALI ARGOMENTI DI EDUCAZIONE CIVICA / CURRICOLO DIGITALE TRATTATI

Architectural barriers: identifying physical obstacles preventing people form accessing some services; proposals for their removal. The concept of ethical behaviour of state and local authorities as for architectural barriers.

Menaggio, 18/05/2023

FIRMA DEGLI ALUNNI

FIRMA DOCENTE