

Health, Safety & Welfare Recognize it when you see it. (for non-Architects)

1. What are the guidelines to Health, Safety, Welfare (HSW)?

AIA members and other architects licensed in states with mandatory continuing education (MCE) requirements for license renewal are required to complete a minimum number of hours of Health, Safety, and Welfare (HSW)-related training.

Health, Safety, Welfare (HSW) in architecture is anything that relates to the structural integrity or soundness of a building or building site. Courses must intend to protect the general public. Health Aspects of architecture have salutary effects among users of buildings or sites and address environmental concerns. Safety Aspects of architecture intend to limit or prevent accidental injury or death among users of the buildings or sites. Welfare Aspects of architecture engender demonstrable positive emotional responses among, or enable equal access by, users of buildings or sites.

3. How does “health, safety, and welfare” (HSW) tie into CES?

The AIA requires members to earn 12 of the basic LU hour requirements in the area of HSW. The percentage of HSW content in any HSW-related activity must be a minimum of 75% to qualify a course or educational event for HSW credit. This accomplishes three goals:

- To ensure that HSW-related programs have a real relevance to our members
- To eliminate any question of whether the content of a course was actually HSW-related
- To maintain content credibility so that AIA members can concurrently satisfy state mandatory continuing education (MCE) requirements, a large majority of which are HSW-related.

4. What specific subject areas qualify for HSW credit?

The following is a compilation of HSW subject areas as defined by the various state licensing boards with HSW requirements. (An individual state may not accept all subject areas. Be sure to check your state licensing board’s HSW definition and requirements.)

The following sections outline the three primary criteria that AIA/CES courses must meet to be approved for HSW LUs. All three criteria must be met for your course to qualify for HSW LUs.

Criterion # 1: Course content must directly support the HSW definition.

Health, Safety, Welfare (HSW) in architecture is anything that relates to the structural integrity or soundness of a building or building site. Courses must intend to protect the general public.

Health: Aspects of architecture that have salutary effects among users of buildings or sites and address environmental concerns.

Examples: Accessibility; acoustical, energy efficiency, mechanical, plumbing, and electrical systems; and materials

Safety: Aspects of architecture intended to limit or prevent accidental injury or death among users of the buildings or sites.

Examples: Codes, regulations, natural hazards, life safety system—suppression, detection, –alarm standards, provisions of fire-rated egress enclosures, automatic sprinkler systems, and stairs with correct rise-to-run proportions

Welfare: Aspects of architecture that engender demonstrable positive emotional responses among, or enable equal access by, users of buildings or sites.

Examples: Building design and materials, methods and systems, construction contracting, ethics and regulations governing the practice of architecture, preservation, adaptive reuse, and the study of environmental issues.

Criterion #2: Course content must include one or more of the AIA/CES-acceptable HSW topics.

Health, Safety, and Welfare Topics

Technical and professional subjects, that the NCARB Board deems appropriate to safeguard the public and that are within the following enumerated areas necessary for the proper evaluation, design, construction, and utilization of buildings and the built environment.

BUILDING SYSTEMS: Structural, Mechanical, Electrical, Plumbing, Communications, Security, Fire Protection

CONSTRUCTION CONTRACT ADMINISTRATION: Contracts, Bidding, Contract Negotiations

CONSTRUCTION DOCUMENTS: Drawings, Specifications, Delivery Methods

DESIGN: Urban Planning, Master Planning, Building Design, Site Design, Interiors, Safety and Security Measures

ENVIRONMENTAL: Energy Efficiency, Sustainability, Natural Resources, Natural Hazards, Hazardous Materials, Weatherproofing, Insulation

LEGAL: Laws, Codes, Zoning, Regulations, Standards, Life Safety, Accessibility, Ethics, Insurance to protect Owners and Public

MATERIALS and METHODS: Construction Systems, Products, Finishes, Furnishings, Equipment

PRE-DESIGN: Land Use Analysis, Programming, Site Selection, Site and Soils Analysis, Surveying

PRESERVATION: Historic, Reuse, Adaptation

Criterion #3: 75 percent of course content must be on HSW topics.

To qualify for HSW credit, 75 percent of a course's content and instructional time must be on acceptable HSW topics, as outlined above. This means that if your course is 1 hour in length, at least 45 minutes (that is, 75 percent) must be spent discussing HSW topics.

In addition, AIA/CES requires that each provider course provide a minimum of four learning objectives. For HSW course qualification, however, three of the four mandatory course learning objectives (that is, 75 percent) must address HSW topics. This is one way that AIA/CES verifies that 75 percent of a course is actually on HSW topics.

For more information on learning objectives, please see the learning objectives section of the AIA CES Provider Manual.

5. How does The Architect Registration Examination tie into the HSW Definition?

The Architect Registration Examination is designed to determine whether applicants for architectural licensure possess sufficient knowledge, skills, and abilities to provide professional services while protecting the health, safety, and welfare (HSW) of the general public. An understanding of HSW is a focus of the ARE. The following is information useful for ARE students, that may also be useful for those trying for a better understanding of HSW.

The Pre-design division focuses on environmental analysis, architectural programming, and architectural practice, including:

Evaluation of existing structures

Impact of sociological influences on site selection and land use

Effect of physiographic and climatic conditions on land use

Ability to develop construction cost estimates and budgets

Development of design objectives and constraints for a project

Effect of human behavior, history, and theory on the built environment

Interpretation of land surveys and legal restrictions

Principles of practice, including office management

Consultant coordination

The General Structures division covers structural systems and long-span design, including:

Basic structural analysis and design

Selection of appropriate structural components and systems

Calculation of loads on buildings

Incorporation of building code requirements

Identification and selection of various structural connections

Analysis of soils reports

The Lateral Forces division concentrates on effects of lateral forces on the design of buildings, including:

General concepts of lateral loads

Identification and calculation of wind loads and seismic loads

Incorporation of code requirements

Requirements for non-structured building components related to lateral forces

The Mechanical/Electrical Systems division addresses mechanical, plumbing, electrical, and acoustical systems (and their incorporation into building design), including:

Incorporation of code requirements

Evaluation, selection, design, and incorporation of appropriate plumbing, HVAC, electrical, and sound control systems

Determination of heating and cooling loads

Selection of building envelope elements

Evaluation of costs of mechanical and electrical systems

The Materials and Methods division addresses the evaluation and selection of materials and methods of installation and the development of building details, including:

Evaluation of site conditions

Incorporation of environmental and cultural issues

Identification and ability to detail concrete, masonry, wood, structural metal, and miscellaneous metal construction

Analysis, selection, and ability to detail moisture and thermal protection systems, door and window systems, finish materials, specialties, and conveying systems

Evaluation of costs of systems

Incorporation of code requirements

The Construction Documents and Services division covers the conduct of architectural practice, including:

Preparation and review of working drawings and specifications

Coordination of contract documents

Preparation of bidding instruments

Evaluation of substitutions and preparation of cost estimates

Interpretation of general conditions

Review of standard agreements

Observation of the progress of work and material testing

Preparation and review of documents for change orders, progress payments, and project closeout

The Site Planning division focuses on the relationship between site use and environment; the consideration of topography, vegetation, climate geography, and law on site development; and the synthesis of programmatic and environmental requirements. Six vignettes test the candidate's understanding of specific areas:

Site design—general site planning principles

Site zoning—cross-sectional building area limitations imposed by zoning and other setback requirements

Site parking—requirements and limitations that influence the design of parking areas and driveways

Site analysis—requirements and limitations that influence subdivisions of land and delineation of building limit areas

Site section—influence of site design requirements on sections

Site grading—understanding of requirements affecting topographic changes

The Building Planning division covers the synthesis of programmatic and environmental issues into coherent designs through the process of schematic design. Three vignettes test the candidate's understanding of specific areas:

Block diagram—development of a diagrammatic floor plan from a bubble diagram

Interior layout—principles of design and accessibility that govern interior space planning

Schematic design—understanding of the planning process involved in schematic design

The Building Technology division also concentrates on the synthesis of programmatic and environmental issues into coherent designs at the design development level. The six vignettes test candidate's understanding of specific areas:

Building section—impact of structural, mechanical, and lighting components on the vertical form of buildings

Structural layout—basic structural framing concepts through development of a framing plan for a simple building

Accessibility/ramp—accessibility requirements related to ramp and stair design

Mechanical/electrical plan—integration of mechanical, lighting, and ceiling systems with structural and other building components

Stair design—the three-dimensional nature of stair design and code issues

Roof plan—basic concepts related to roof design through the development of a roof plan for a small structure.