Course Development Guidelines

Every AIA CES registered course must be carefully developed and designed according to CES policies and with the needs and learning preferences of architects in mind. This section outlines some primary things to keep in mind when developing a course.

What Qualifies as AIA CES Education?

The AIA CES continuing education program is directed exclusively to architect, engineer, and construction industry (AEC) professionals and primarily serves AIA architect members.

In general, AIA CES registered course content must be applicable to the architecture industry and benefit or enhance an architect's practice.

In addition, approved courses should help architects to

- Acquire new knowledge or skills
- Build upon or expand current knowledge or skills
- Stay up to date on new developments in the field
- Learn best practices
- Advance their careers by teaching content that will lead to additional certifications or degrees
- Think creatively and develop new ideas

Furthermore, AIA CES-registered courses *must* be implemented and delivered with the intent to teach and *must be* strictly educational in nature. Therefore, product or services promotions are not permitted at any time during a course.

Course Development Principles

When a course developer understands the adult learner and knows productive presenter skills, the opportunity for participants to gain new knowledge throughout the course is enhanced.

Adults have a need to know. They are ready and motivated to learn when they can identify how a new skill will benefit them. If they come into the activity feeling that they do not need this knowledge, they will not learn it. Sometimes the benefits of a learning

activity may seem clear to the presenter, but the presenter should always take the time to clarify these benefits. The more adults have their "need to know" met, the more likely they are to fully participate and benefit from the learning activity.

An adult approaches learning to find answers or solutions to identified problems or questions. The presenter's role is to help participants not only learn the material but also learn how to apply it in real-world situations. Because course participants seek knowledge that is applicable to their circumstances, effective adult learning activities should include simulations, case studies, and problem-based learning.

Although adult learners already know a lot, they may not recognize how much they already know. A good presenter helps them realize what they have learned from experience, practice, and education and how to apply it to the new knowledge they are gaining. Adults are capable of connecting what they are learning with applications in the real world; a presenter assists with this linkage.

Adults also bring career experience, social relationships, cultural involvement, and personal interests to educational courses. Through the process of aging and maturing, adults have gained emotions, values, priorities, insights, and experience in applying logic. What adults bring into the classroom will shape what and how they learn. An effective presenter should respect this and incorporate the participants' experiences into the learning activity. This will provide a basis for learning and enhance educational experience.

Adult learners have control over their own learning. Presenters must respect this. Adults make their own educational decisions based on factors both internal (need, desire) and external (career, social). The presenter must not force information, activities, or a learning style on an adult. Because good presenters are more focused on the outcome of the session and understand how adult learning styles and needs may vary, they are flexible and able to vary any structured "lesson plan" to meet the group's needs and styles.

Effective presenters go beyond the role of simply teaching. They understand the relationship between themselves as an educator and the adult learner. They value the experience adults bring to a learning setting, and they are able to create an environment that stimulates and motivates learning.

Good presenter skills include the ability to

- *Explain information effectively.* Vary methods, use examples, and provide metaphors to emphasize points and comparison.

- *Question the learner.* Ask open-ended questions, stimulate discussion, and encourage comprehension (for example, through analysis and evaluation). Responding to questions, mentally or verbally, helps a learner internalize the knowledge rather than just remember the information.

- *Motivate learning.* Encourage, excite, and inspire the learner about ideas and information.

- *Analyze information.* Help learners understand options and break down the information for better comprehension.

- *Manage the learning environment.* Monitor discussions, tone down strong members of a group or bring out less vocal ones, resolve disagreements, and keep discussions on track.

- *Create an environment that addresses all senses.* Support what you say with visual aids, as people learn mostly by what they see. To make the impact stronger, provide tactile stimulation (handling materials samples, keying into a computer, or filling out a worksheet) to support what you said and what they saw.

- *Set up the room to promote interaction and collaboration*. Provide comfortable environments in which participants can see and talk to the presenter and the other learners.

- Combine style, materials, and audiovisual aids in a way that will not distract participants from the learning objectives or goals or the course. Stimulate, support, and motivate without diverting the attention and focus of the group.

- *Know the levels of knowledge in the group.* Be careful not to talk down to participants or talk over their heads. A simple assessment (oral or written) should be made before the start of the course. This will tell the presenter who has background knowledge or experiences that can contribute to the discussions.

For additional tools and information about course development, see the ***provider online resources section*** *of the manual.*

Course Learning Objectives

AIA CES strives to maintain the highest standards of education, using all tools available to consistently improve provider courses. Learning objectives shape a learning event and help ensure its success. This is why we require all courses to have learning objectives.

Learning objectives are an extremely effective tool for assessing whether the desired student outcomes are accomplished and whether a presenter has successfully taught the material.

AIA CES learning objectives course requirement

AIA CES requires that all provider courses have learning objectives, which must be listed when registering a course. There is a minimum requirement of four learning objectives per course. If your course is being offered for Health, Safety, and Welfare (HSW) or Sustainable Design (SD) credits, then three of the four learning objectives must address these topic areas because of the 75 percent course content rule for those types of courses.

See the **HSW and/or SD section** of the manual to learn more about the 75 percent course content requirement.

What is a learning objective?

A learning objective is an explicit statement that clearly expresses what the student will learn or be able to do after taking the course. It is an observable and measurable student outcome statement. Learning objectives should be concise and concrete so that they are open to limited interpretation. Learning objectives should begin with, "*At the end of this course, participants will be able to…*"

Writing learning objectives is where design and developing an educational course begins. Learning objectives help students clarify their personal goals for a course and give them a framework against which to measure their success.

A learning objective consists of three parts:

BEHAVIOR
Describes what participants will be able to do as a consequence of taking a course. (for example, "calculate")

CONDITION
Describes conditions under which the student will perform the behavior.
(for example, "using the sample course residential project")

CRITERIA
Describes the criteria you will use to evaluate student performance.
(for example, "the total cost of materials")

Combine the **behavior**, **condition**, and **criteria** and you have an official learning objective.

EXAMPLE: "At the end of the course participants will be able to calculate the total cost of materials using the sample course residential project."

For more information on writing learning objectives, visit the **AIA CES learning objectives Web page**.

Course Titles

All course titles should describe the course content. As noted earlier, the AIA tracks member continuing education activities on an AIA transcript. This transcript is often used by members to show their state licensing board their continuing education coursework. Unfortunately, the only thing that state licensing boards can see on the course transcript is the provider name, date and time the course was taken, the type of learning units, and the course title. Since this is the only course information displayed on the transcript, it is important to make the titles as accurate and descriptive of the course content as possible.

Course Levels

Results from the 2011 AIA commissioned "Continuing Education System (CES) Needs Assessment Study" conducted by Rockbridge Associates, Inc. shows that members are looking for Intermediate courses on most topics. With that in mind, it is the perfect time to define what makes AIA CES courses Beginner, Intermediate and Advanced level.

Who determines if a course is *intermediate*?

The level of the course is determined by the person designing the course. The determination is based on the amount of information and at what pace the information will be presented. If the course will present less information and move at a slower pace, usually it is a beginner course. However, if the course is moving at a faster pace with more information it is considered to be a higher level course. The Intermediate level will be mid-level.

Beginner Courses have the following criteria:

- For individuals with limited or no prior knowledge or experience of the subject area
- Helps individuals learn about the subject area
- For individuals new to the field, just learning or starting out
- For young or inexperienced professionals
- For individuals seeking to learn the fundamentals about a subject area

Intermediate Courses have the following criteria:

- For individuals who have some knowledge of the subject area
- For individuals with experience in the subject area
- For individuals who have some application of the subject area

- For individuals who are mid-level in the field with some degree of competence
- For individuals seeking to build on, apply or enhance knowledge in subject area

Advanced Courses have the following criteria:

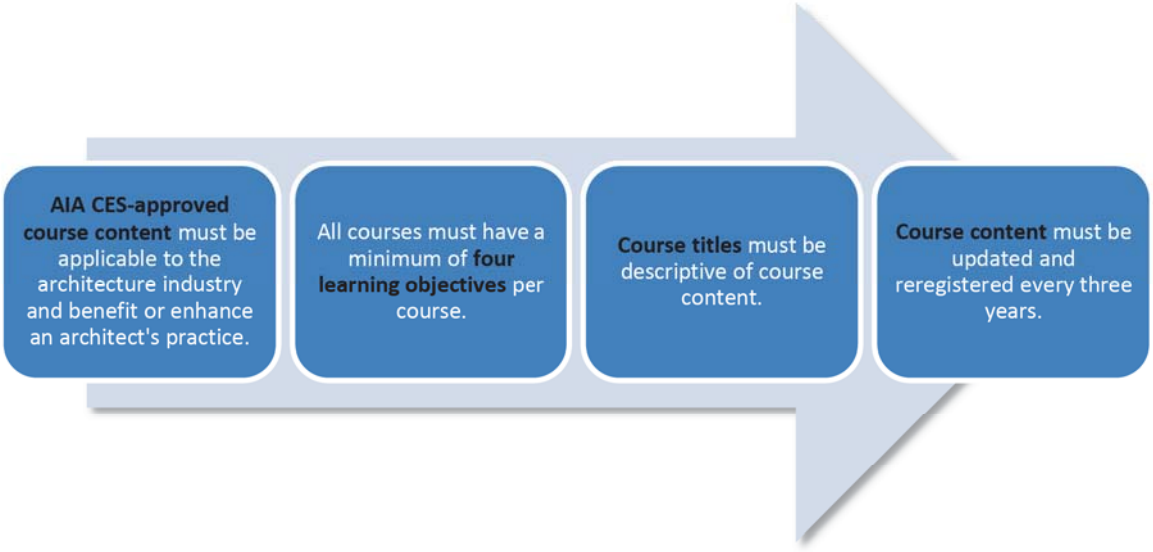
- For individuals with experience and knowledge in the subject area
- For individuals well beyond the beginning and mid-level
- For individuals with greatly developed knowledge and seeking to heighten their knowledge
- For knowledgeable individuals seeking to move ahead in the subject area
- For individuals seeking information to aid in the growth or progress of knowledge
- For individuals seeking the most up- to-date knowledge in the subject area
- For individuals who could be deemed an expert in the field

Providers are now encouraged to add the appropriate course level in the keywords field when registering courses in CES Discovery. In addition, you can also add the course level as the last sentence in the course description field.

Course Shelf Life

Providers must update and reregister courses every three years to ensure that the course content is up to date. Courses that are not used or updated every three years will automatically be dropped from the system and be ineligible for AIA CES credit. In addition, we encourage providers to update and re-register courses because AIA members are only permitted to take the same course once every three years for AIA CES continuing education credit.

Course Development Section Summary



IV

Health, Safety, Welfare (HSW) and Sustainable Design (SD) Guidelines

Health, Safety, Welfare (HSW) and Sustainable Design (SD) Guidelines

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. AIA members are required to take eight learning unit (LU) hours of continuing education per year in approved HSW topics. Because many architects are required to take HSW courses and these courses are in high demand by both AIA members and architects licensed in states with MCE requirements in HSW, providers are encouraged to offer HSW education.

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.

AIA CES ACCEPTABLE HSW TOPICS

Technical and professional subjects that the 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 manual.

Sustainable Design (SD)

AIA architect members need to be well informed about and have access to up-to-date sustainable design techniques and business practices so they can best serve their clients and remain on the forefront of the global market transformation.

Mandatory continuing education in sustainable design demonstrates that the AIA and its members are committed to leading the way toward carbon neutrality in buildings. AIA members are required to take a minimum of four hours in SD topics annually for AIA membership renewal.

The following section outlines the five primary criteria that AIA CES courses must meet to be approved for AIA CES HSW/SD learning units. Please note that all five criteria must be met for your course to qualify for HSW/SD.

Criterion #1: Course content must directly support the definition of sustainable design.

Sustainability is the concept of meeting present needs without compromising the ability of future generations to meet their own needs.

Sustainable design is achieved through an integrated design and delivery process that enhances the natural and built environment by using energy sensibly with a goal toward carbon neutrality; improves air and water quality; protects and preserves water and other resources; and creates environments, communities, and buildings that are livable, comfortable, productive, diverse, safe, and beautiful.

For more detailed information on sustainable design, please refer to Guidelines For Approving AIA CES Sustainable Design Courses.

Criterion # 2: Course content must address at least one COTE Top 10 measure.

The COTE Top 10 are the AIA **C**ommittee **O**n **T**he **E**nvironment's Ten Measures (subject areas) of Sustainable Design and Performance Metrics.

AIA COTE TOP 10 QUALIFYING MEASURES

1. **Sustainable Design Intent & Innovation**
   Sustainable design is an inherent aspect of design excellence. Projects should express sustainable design concepts and intentions and take advantage of innovative programming opportunities.

2. **Regional/Community Design & Connectivity**
   Sustainable design values the unique cultural and natural character of a given region.

3. **Land Use & Site Ecology**
   Sustainable design protects and benefits ecosystems, watersheds, and wildlife habitat in the presence of human development.

4. **Bioclimatic Design**
   Sustainable design conserves resources and maximizes comfort through design adaptations to site-specific and regional climate conditions. Describe how the building responds to local climate, sun path, prevailing breezes, and seasonal and daily cycles through passive design strategies.

5. **Light & Air**
   Sustainable design creates comfortable interior environments that provide daylight, views, and fresh air.

6. **Water Cycle**
   Sustainable design conserves water and protects and improves water quality

7. **Energy Flows & Energy Future**
   Sustainable design conserves energy and resources and reduces the carbon footprint while improving building performance and comfort. Sustainable design anticipates future energy sources and needs.

8. **Materials & Construction**
   Sustainable design includes the informed selection of materials and products to reduce product-cycle environmental impacts, improve performance, and optimize occupant health and comfort.

9. **Long Life, Loose Fit**
   Sustainable design seeks to enhance and increase ecological, social, and economic values over time.

10. **Collective Wisdom & Feedback Loops**
    Sustainable design strategies and best practices evolve over time through documented performance and shared knowledge of lessons learned.

CRITERIA 3-Course content must address at least one AIA 50>50 strategy or additional approved topics.

AIA 50>50 is a list of 50 strategies that the AIA adopted toward a 50-percent reduction in carbon emissions.

The following is a list of **COTE Top 10 Measures** and the relevant **AIA 50>50 strategies** that support each measure and meet the AIA sustainable design requirements.

1. Sustainable Design Intent and Innovation

AIA 50>50 Strategies

Building form
Energy modeling
Integrated project delivery
Passive solar collection opportunities
Preservation/reuse of existing facilities
Rightsizing equipment
Space zoning
Sun shading
Thermal bridging
Vegetation for sun control
Walkable communities
Waste-heat recovery
Windows and openings

Additional Approved Topics
-Biomimicry

2. Regional /Community Design and Connectivity

AIA 50>50 Strategies

Alternative transportation
Appropriate size and growth
Open, active day-lit spaces
Passive solar collection opportunities
Preservation/reuse of existing facilities
Renewable energy resources
Vegetation for sun control
Walkable communities
Water conservation
Windows and openings

Additional Approved Topics
-Zoning, regulatory, codes

3. Land Use and Site Ecology

AIA 50>50 Strategies

Alternative transportation
Appropriate size and growth
Building orientation
Daylighting
Earth sheltering
Efficient site lighting systems
Geoexchange
Green roof
Mass absorption
Natural ventilation
Passive solar collection opportunities
Preservation/reuse of existing facilities
Sun shading
Vegetation for sun control
Walkable communities
Water conservation
Windows and openings

Additional Approved Topics
-Safety and Security Systems (defensive planting, innovative design, defensive space)

4. Bioclimatic Design

AIA 50>50 Strategies

Building form
Building orientation
Cool roofs
Daylighting
Earth sheltering
Geoexchange
Green roof
Mass absorption
Natural ventilation
Open, active day-lit spaces
Passive solar collection opportunities
Smart controls
Space zoning
Sun shading
Thermal bridging
Vegetation for sun control
Walkable communities
Water conservation
Windows and openings

Additional Approved Topics
-Biomimicry

5. Light and Air

AIA 50>50 Strategies

Building monitoring
Daylighting
Efficient artificial lighting
Natural ventilation
Open, active day-lit spaces
Sun shading
Vegetation for sun control
Windows and openings

Additional Approved Topics
-Indoor Environmental Quality

6. Water Cycle

AIA 50>50 Strategies

Conserving systems and equipment
Energy-saving appliances and equipment
Geoexchange
Green roof
Vegetation for sun control
Water conservation

Additional Approved Topics
-Embodied water

7. Energy Flows and Energy Futures

AIA 50>50 Strategies

Active solar systems
Alternative energy
Building form
Building monitoring
Carbon offsets
Co-generation
Conserving systems and equipment
Cool roofs
Daylighting
Earth sheltering
Efficient artificial lighting
Efficient site lighting systems
Energy modeling
Energy source ramifications
Energy-saving appliances and equipment
Geoexchange
Green roof
High-efficiency equipment
Life cycle assessment
Mass absorption
Material selection and embodied energy
Natural ventilation
Passive solar collection opportunities
Photovoltaics
Radiant heating and cooling
Renewable energy resources
Rightsizing equipment
Smart controls
Space zoning
Sun shading
Systems commissioning
Systems tune-up
Thermal bridging
Total building commissioning
Vegetation for sun control
Waste-heat recovery
Water conservation
Windows and openings

8. Materials and Construction

AIA 50>50 Strategies

Cavity walls for insulating airspace
Construction waste management
Cool roofs
Deconstruction and salvage materials
Energy-saving appliances and equipment
High-efficiency equipment
Life-cycle assessment
Mass absorption
Material selection and embodied energy
Photovoltaics
Radiant heating and cooling
Rightsizing equipment
Thermal bridging
Total building commissioning
Vegetation for sun control
Windows and openings

Additional Approved Topics
-Indoor environmental quality
-Biomimicry
-Prefabrication
-Green specifications

9. Long Life/Loose Fit

AIA 50>50 Strategies

Deconstruction and salvage materials
Preservation/reuse of existing facilities
Material selection and embodied energy
Space zoning
Total building commissioning
Windows and openings

10. Collective Wisdom and Feedback Loops

AIA 50>50 Strategies

Building monitoring
Energy modeling
Environmental education
Integrated project delivery
Life-cycle assessment
Preservation/reuse of existing facilities
Smart controls
Staff training* (technical training)
Systems commissioning
Systems tune-up
Total building commissioning

Additional Approved Topics
Contract documents related to sustainable design

*Staff training is related to applying knowledge gained from reviewing earlier projects (feedback loops) or verifying outcomes of earlier projects. This material shall not include "train-the-trainer" type learning.

CRITERIA 4-Course content must qualify for Health, Safety, and Welfare (HSW).

Sustainable Design courses must focus on the direct application of techniques and strategies that advance the concept of sustainable design as defined above. These topics all deal with or affect the health, safety, and welfare of the public and our communities and, as a result, all learning units qualified as "sustainable design learning" shall simultaneously be approved as HSW learning.

For more information on HSW, please see the **HSW Section** of the Manual.

CRITERIA 5-75 percent of course content must cover sustainable design.

To qualify for Sustainable Design learning (SD), 75 percent of a course's content and instructional time must be on SD topics, as outlined earlier. This means that if your course is one hour in length, at least forty-five minutes (75 percent) must be spent discussing sustainable design topics.

In addition, AIA CES requires that all provider courses provide a minimum of four learning objectives for each course. For SD course qualification, however, three of the four mandatory course learning objectives (75 percent) must address sustainable design topics.

HSW and SD Section Summary

For complete sustainable design course development guidelines, which include COTE Top 10 Measures and 50>50 Strategies definitions, please visit our **website**.