



ABOUT THE PROGRAM

AIA+2030: Professional Training for the Sustainable Design Work Force

AIA+2030 trains green-collar workers in the architecture and engineering fields to design buildings that use 60% less energy. The AIA+2030 Professional Series™ is a comprehensive, ground-breaking curriculum that includes ten, 4-hour sessions. The AIA+2030 program was launched in Seattle in 2009, and has been extremely successful. The AIA + 2030 Series program is the result of a partnership between the American Institute of Architects Seattle, Architecture 2030, BetterBricks, and the City of Seattle. AIA Seattle and Architecture 2030 are now bringing the Series to other AIA chapters.

Sessions assume participants have an intermediate understanding of the suite of energy efficiency strategies and technologies available to a design professional. Session information is cumulative and aims to provide an overall understanding of specific design strategies and how they can be integrated to provide optimal results. Regional case studies will illustrate concepts and lessons learned. Experts from both academia and active practice will lead the sessions. A full listing of the speakers for each session will be included in the January FORUM newsletter. Participants will be provided tools to take back to their firms to help share and implement the knowledge and skills gained.

Speakers for each Session will be published as soon as they are confirmed.

AIA+2030 Series Sessions:

Session I: The 2030 Challenge®: Energy Goals and Integrated Design

Friday, April 13, 2012 - Historic Fifth Street School Conference Room - 8am – Noon

Moderator: **JENNIFER TURCHIN, AIA**

Speakers: **WILLIAM G. REED, AIA LEED** - An internationally recognized proponent and practitioner in sustainability and regeneration Bill's work centers on creating the framework for and managing an integrative, whole-systems design process.

VINCENT MARTINEZ, AIA - The Director of Research for Architecture 2030, responsible for in-depth technical information and data analysis. He is head of the Architecture 2030 Seattle office and leads Architecture 2030's involvement in the AIA+2030 Professional Educational Series in Seattle 2030 District

Course Description: Integrated design is an important element in the creation of next-generation 2030 Challenge compliant buildings. In this session, we will explore the Integrated Design Process (IDP) and Integrated Project Delivery (IPD). We will explore collaborative strategies that can achieve the targets outlined in the 2030 Challenge, and how this process can be used as a roadmap throughout the design process. In particular, we will examine the utility of IDP in defining core, early design decisions such as building form and orientation.

Session II: The Power of Targets & Load Reduction

Friday, May 11, 2012 - Historic Fifth Street School Auditorium - 8am - Noon

Course Description: The goal of the 2030 Challenge® is to create buildings that are designed to meet a fossil fuel, greenhouse gas emitting, energy performance standard of 60% less than the regional (or national) average for that building type now, with the standard rising to a 70% reduction in 2015 and incrementally increasing 10% in efficiency every five years until 2030, when the goal of zero emissions is met. One of the more compelling aspects of dramatic energy reductions is the mounting evidence that if done well, such ambitious goals can actually be done with little or no added costs. This session will explore the use of EPA's Target Finder (ENERGY STAR) to establish design targets and metrics, such as Energy Use Intensity (EUI). The session will include multiple examples of projects that have achieved exemplary energy performance, offer approaches for incorporating targets into the design process, and explore how providing targeting and EUI information can be a value-added service for design firms.

Session III: Accentuate the Positive: Climate Responsive Design

Friday, June 1, 2012 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: Conventional building design presumes that a building's energy will be imported in the form of electricity and fuel. Integrated design accounts for on-site resources, as well as minimizing unwanted environmental conditions. In this session, we'll explore using climate data and site characteristics to conduct a Site Resource Inventory to inform building design and lower building energy loads. This will set the stage for future sessions that will address specific strategies in more detail.

Session IV: Skins: The Importance of the Thermal Envelope

Friday, September 7, 2012 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: The building skin is the critical interface between occupant comfort and outdoor climatic conditions. A high performance building requires a high performance envelope, one that responds to exterior environmental impacts at various times of the year. This session will explore design, material and technology approaches to wall and window assemblies, from straightforward low cost methods to advanced double skinned wall applications. We will also address moisture issues associated with various wall insulation approaches.

Session V: Aggressively Passive: Employing Passive Systems for Load Reduction

Friday, October 5, 2012 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: Properly designed, a building captures existing site resources such as light, wind, and solar radiation to provide for the comfort and needs of occupants. Passive systems work in concert with site resources to manage building energy demand through design. This session will build upon the concepts introduced in Sessions 3 and 4 and explore a holistic strategy for designing passive systems.

Session VI: Illuminating Savings: Daylighting and Integrated Lighting Strategies

Friday, November 9, 2012 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: Lighting constitutes 29 percent of a typical American office building's energy load. Proper lighting is critical to occupant comfort and productivity—and an exploration of daylighting and efficient artificial lighting is an exploration of integrated design. This session will explore natural light as part of a site's resource inventory, and identify strategies for maximizing its application while controlling for glare and unwanted heat gain. It will couple this discussion with the latest research and application of artificial lighting choices designed to meet residual lighting needs.

Session VII: Right-Sized: Equipment and Controls for Super-Efficient Building System

Friday, January 11, 2012 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: After designing for maximum passive use of site resources and mitigating energy loads, the next step to a breakthrough building is properly sized equipment and employment of advanced controls. This session will explore the concept and application of designing and specifying equipment and controls for buildings that need mechanical intervention only during periods of peak demand. Systems such as hybrid natural-mechanical ventilation systems and other approaches to engineering a mechanical system to be as small (efficient) and effective as possible will be explored.

Session VIII: Site Power: Renewable Energy Opportunities

Friday, February 8, 2013 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: The ultimate goal of the 2030 Challenge is fossil fuel free buildings by the year 2030. As buildings approach zero for their carbon footprint, on-site renewable energy sources become a key element to realizing that goal. As the lower-up-front-cost conservation and efficiency measures are exhausted, renewable energy emerges as the final step to reaching aggressive carbon elimination goals. This session will explore the relationship between conservation and renewable energy, and investigate current renewable energy opportunities, both onsite and offsite systems, such as combined heat and power and local district energy (valuable for load sharing).

Session IX: The Hand-off + Staying in Shape: Operations, Maintenance + Education

Friday, March 1, 2013 - Historic Fifth Street School Auditorium - 8am – Noon

Course Description: Design intent is important, but at the end of the day, how the building actually performs is really what matters. The closer the match between predicted and observed performance, the more likely a client will be happy. This session will explore the tools available to an architect to help match performance with expectations, including building commissioning, maintenance staff and occupant training, and building performance monitoring. Using building performance data to validate and improve on design and construction decisions will also be explored— providing a strong tool for iterative learning and innovation.

Session X: Putting It All Together: Achieving 2030 Goals On The Project and At The Office

Friday, April 5, 2013 - Historic Fifth Street School Auditorium - 8am - Noon

Course Description: Success with advanced energy performance projects requires not only a detailed understanding of the individual strategies involved, but also a strategic understanding of the architect's role in the design and construction process and how to orchestrate an already dauntingly complex process. This session revisits the integrated design and target creating process, and then looks outward to contextualize the architect in the larger environment of the project and—equally important—the firm. Key to the success of the 2030 Challenge is movement from learning to action. This session will examine the movement from in-class exercise to on-site implementation. Additionally, the session will provide tools for helping your firm institutionalize the creation of high-performance buildings and becoming a change agent within your community.