ARCHITECTURE ENGINEERING SUSTAINABLE DESIGN (AESD1-CE)

AESD1-CE 9390 Principles of Sustainable Real Estate (0 Credits)
Learn the core concepts of sustainable design. Topics include an overview of the current initiatives and practices used to economically and successfully implement eco-friendly measures in the design, construction, and development of commercial and residential high-rise properties; government initiatives and guidelines; rating systems; and financial incentives. Examine the roles of the owner, project consultant, and government in sustainable construction; life-cycle analysis and costing; size selection; building materials; energy, water, indoor environmental quality, and waste management; building commissioning and post-occupancy evaluation; and building operations and management. Case studies are used throughout the course.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9641 Managing Sustainable Building Projects (0 Credits)
Whether you are an owner, a manager, a designer, or a contractor, understanding the administrative and technical requirements of a sustainable construction project—and the need for effective organization—is essential to success. Examine strategies for integrated design, goal setting, specifications, construction administration, commissioning, post-occupancy evaluation, and LEED certification. Topics include concepts of whole building design; green product evaluation and selection; recyclables; construction waste management; renewable and certified materials; and risk management, including warranty and guarantee issues.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9643 High-Performance, Energy-Efficient Building Systems (0 Credits)
Owners, managers, and tenants in high-performance buildings benefit from lower operating costs and a healthier environment. Using case studies and practical examples, examine the financial benefits of energy efficiency as a result of integrated building systems, renewable energy sources, and mechanical systems selection. Learn systems design options for new and existing buildings that meet high-performance building objectives and standards. Topics include building envelope and wall construction, site orientation, material selection, daylighting, natural ventilation, lighting design, passive and active solar design, geothermal and wind power, HVAC systems, water conservation strategies, energy modeling, performance verification techniques, and life-cycle economic analysis.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9644 Sustainable Real Estate Development (0 Credits)
Familiarize yourself with the process of identifying, evaluating, negotiating, developing, marketing, and selling a green building. Topics include site assessment, selection, and design; land use planning; smart growth; brownfields redevelopment; adaptive reuse and infill development; renewable energy planning; economic perspective, including project budget and feasibility study; financing; market studies; marketability and identity; risk; community approval; public/private partnerships; legal issues and contracts; governmental policy and initiatives; subsidies and allowances; project management strategies; and transportation as they all pertain to environmentally sustainable design.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9645 LEED Green Associate Exam Preparation Course (0 Credits)
Prepare for the Leadership in Energy and Environmental Design (LEED) examination with this workshop that includes hands-on vignette experience mimicking the process and practice questions found on the LEED exam. Topics include the LEED rating system, the LEED process, and an overview of all LEED credits and prerequisites.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9646 Accelerated LEED Green Associate Exam Preparation Course (0 Credits)
The Green Associate exam is a required first step in the new U.S. Green Building Council (USGBC) and its Green Building Certification Institute (GBCI) LEED 3.0 or LEED 2010 exam credentialing process. This LEED Green Associate exam preparation course includes a complete review of the LEED rating systems, simulated exam questions, worksheets, and strategies for passing the exam.

Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9647 Accelerated LEED AP and Building Design and Construction Exam Preparation Course (0 Credits)
For those seeking the LEED AP and BD&C certification, this course provides a full review of LEED credits and the LEED building certification process, hundreds of simulated exam questions, a practice exam, memorization worksheets, an overview of computer-based testing, and strategies for passing the exam. The comprehensive LEED review includes simulated questions relevant to each credit, including sustainable sites (SS), water efficiency (WE), energy and atmosphere (EA), materials and resources (MR), indoor environmental quality (EQ), and innovation in design (ID).
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9648 Accelerated LEED APand Existing Buildings Operations and Maintenance Exam Preparation Course (0 Credits)
For those seeking the LEED APand O&M certification, this course provides a complete review of LEED credits and the LEED building certification process, simulated exam questions, an overview of computer-based testing, and strategies for passing the exam. The comprehensive LEED review includes simulated questions relevant to each credit, including sustainable sites (SS), water efficiency (WE), energy and atmosphere (EA), materials and resources (MR), indoor environmental quality (EQ), and innovation in design (ID).
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9649 Building Commissioning (0 Credits)
Learn how a quality commissioning process can help bridge the gap between design, construction, and operations for today's new generation of high-performance buildings. Using an integrated building design methodology, learn how to apply the commissioning process from early pre-design to construction and post-occupancy. Topics covered include the purpose of building commissioning, the Owner's Project Requirements (OPR), the Basis of Design (BOD), the roles and responsibilities of project participants, and LEED certification requirements for commissioning. Also, discuss implementing integrated building design methodology and pursuing commissioning for new construction and existing buildings (retro-commissioning).
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9650 LEED Green Associate Exam Preparation Course (0 Credits)
The Green Associate exam is a required first step in the new U.S. Green Building Council (USGBC) and its Green Building Certification Institute (GBCI) LEED 3.0 and LEED 2011 exam credentialing process. This LEED Green Associate exam preparation course includes a complete review of the LEED rating systems, simulated exam questions, worksheets, and strategies for passing the examine.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9651 LEED AP and Building Design and Construction Exam Preparation Course (0 Credits)
For those seeking the LEED AP and BD&C certification, this course provides a full review of LEED credits and the LEED building certification process, simulated exam questions, a practice exam, memorization worksheets, an overview of computer-based testing, and strategies for passing the exam. The comprehensive LEED review includes simulated questions relevant to each credit, including sustainable sites (SS), water efficiency (WE), energy and atmosphere (EA), materials and resources (MR), indoor environmental quality (EQ), and innovation in design (ID).
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9652 LEED AP and Existing Buildings Operations and Maintenance Exam Preperation Course (0 Credits)
For those seeking the LEED AP and O&M certification, this course provides a complete review of LEED credits and the LEED building certification process, simulated exam questions, an overview of computer-based testing, and strategies for passing the exam. The comprehensive LEED review includes simulated questions relevant to each credit, including sustainable sites (SS), water efficiency (WE), energy and atmosphere (EA), materials and resources (MR), indoor environmental quality (EQ), and innovation in design (ID).
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes

AESD1-CE 9668 Sustainable Real Estate: Green Building Design, Development and Management (0 Credits)
This one-week intensive course examines the design, development, and management of new and existing green buildings, including the evolution and economics of sustainable development; the project development team; integrated design and project delivery; property valuation considerations; life-cycle cost analysis; building, zoning,and energy codes; financing, including subsidies, grants and tax incentives; the certification programs, process, and alternatives; the LEED certification rating system; the market for retrofits; energy conservation versus energy efficiency; and green building operations.
Grading: SPS Non-Credit Graded
Repeatable for additional credit: Yes