



BOSTON
ARCHITECTURAL
COLLEGE

FALL 2017

CONTINUING EDUCATION CATALOG

Certificates + Individual Courses

CONTINUING EDUCATION: CERTIFICATES AND INDIVIDUAL COURSES

The Boston Architectural College (BAC) is a fully accredited nonprofit college that has been educating architects and designers for more than 125 years. In addition to traditional degree programs, the BAC also offers an enriching Continuing Education (CE) program with a variety of individual courses, as well as certificate programs in Digital Design and Visualization, and Sustainable Design. Students have the opportunity to grow their knowledge, expand their professional profiles, and develop new skills.

The BAC's continuing education community is comprised of individuals diverse in age, occupation and experience, enriching each class with fresh perspectives. Practicing design professionals enhance their skills or earn required Continuing Education credits; certificate students prepare to start a first, or recently discovered career, and design enthusiasts take individual courses for pleasure.

Whether onsite or online, every CE course provides an opportunity to learn from practicing professionals who are leaders in their fields. Students taking onsite classes benefit from our evening and daytime offerings, our vibrant, urban location, and our proximity to local design firms, galleries, upscale interior showrooms, and more. For students participating in online classes and programs, our instructor-led courses generate ongoing academic conversations.

CE students are encouraged to enroll directly into courses via the BAC's website. For additional information on course offerings and certificate programs, you may visit <http://the-bac.edu/> or contact Continuing Education.

CONTINUING EDUCATION CONTACT INFORMATION

EMAIL: ce@the-bac.edu

MAIN PHONE: 617-585-0135

MAILING ADDRESS:

Registrar's Office
Boston Architectural College
320 Newbury Street
Boston, MA 02115

Beverly Verla, Registration Coordinator

DIRECT PHONE: 617-585-0103

PHYSICAL ADDRESS:

Student Services Suite
951 Boylston Street
Basement Level
(Accessed by the Elevator Only)

CERTIFICATE PROGRAMS

DIGITAL DESIGN AND VISUALIZATION CERTIFICATE

The Certificate Program in Digital Design and Visualization allows students to build expertise in computer-based design technologies and learn skills relevant to the evolving trends of current-day design practices. Graduates of this certificate are equipped with the latest software applications and knowledge for use in the design technology work environment.

Four classes are required to complete the certificate. To fulfill this requirement, students select from any of the courses offered in the area of Digital Design and Visualization. Eligible courses are listed here: <http://the-bac.edu/academics/certificates-and-individual-courses/digital-design-and-visualization>. Eligible courses are noted and can be found in the Digital Media & Media Arts section.

SUSTAINABLE DESIGN GRADUATE CERTIFICATE

The BAC's Sustainable Design Certificate is the oldest academic credential in this subject in the United States. It includes a flexible range of courses from The Sustainable Design Institute.

To earn the certificate, students must complete six courses in the program and maintain a cumulative B- average. Certificate course requirements can be found here: <http://the-bac.edu/academics/certificates-and-individual-courses/the-sustainable-design-institute/sustainable-design-certificate>.

The Sustainable Design Institute offers over 30 eight-week, online, graduate-level courses in sustainable design principles and practices. A bachelor's degree is required for enrollment in the certificate program. Students who do not have a bachelor's degree should contact us.

CERTIFICATE PROGRAM ENROLLMENT

To enroll in a current BAC Certificate Program, the following enrollment materials are required. Please submit these enrollment requirements to Continuing Education in the Registrar's Office.

DIGITAL DESIGN & VISUALIZATION CERTIFICATE

Enrollment Requirements:

1. [Certificate Enrollment Form](#)
2. \$50 Non-refundable Enrollment Fee

SUSTAINABLE DESIGN GRADUATE CERTIFICATE

Enrollment Requirements:

1. [Certificate Enrollment Form](#)
2. \$50 Non-refundable Enrollment Fee
3. Official Undergraduate or Graduate Transcript

ADDITIONAL INFORMATION FOR CERTIFICATE STUDENTS CAN BE FOUND BY VISITING [CURRENT CERTIFICATE STUDENTS](#).

REGISTRATION AND FINANCIAL INFORMATION

REGISTERING FOR COURSES

Students are encouraged to register online for Continuing Education courses. The online registration portal (Self-Service) may be found via the BAC's website: <https://selfservice.the-bac.edu/selfservice/Home.aspx>. All returning students should have login information. Questions regarding login credentials may be directed to the BAC's helpdesk at help@the-bac.edu or 617.585.0191. New students should create an account within the database.

After accessing their accounts, students should select the Register for Courses tab, and select Continuing Education Registration. Students may search for courses either by course number or semester. Once the desired course has been located, it may be added to the student's cart. The student may then select additional courses, or finalize the registration. Please note that select courses carry pre-requisite requirements. Only those students that have met the pre-requisite requirement or have obtained permission from the BAC, may enroll in a course without meeting the pre-requisite requirement. Payment in full is due at the point of registration.

In addition to online registration, students may also submit a registration form to Continuing Education through email or in-person. The [CE Course Registration Form](#) can be found on the BAC's website, and may be submitted via email to ce@the-bac.edu or in-person at our office in the Student Services Suite.

FINANCIAL AND POLICY INFORMATION

TUITION AND FEES

Full payment of tuition and fees is required at the time of registration. Pricing information is available on the BAC's website. Payments may be made online by credit card and electronic check. Students utilizing a third party payment vendor, such as VA Benefits or a private loan company, should contact Continuing Education prior to enrolling.

DISCOUNTS

Graduates of BAC degree and certificate programs may take Continuing Education courses at 50% of the current price. Individuals 60 years of age or older receive a discount of 10% on tuition for courses. Discounts cannot be applied electronically via Self-Service. Students eligible for a tuition discount need to complete and return the [CE Course Registration Form](#) with payment information included.

DROPPING A COURSE OR WITHDRAWALS

Students wishing to drop or withdraw from a course must do so by submitting a request in writing to Continuing Education by the published deadlines on the [Academic Calendar](#). Non-attendance in a course does not constitute a withdrawal or course drop.

REFUNDS

Refunds are processed upon the submission of an [Add/Drop form](#), and pro-rated based on when the request is received by the Registrar's office. Courses may be dropped with no financial penalty prior to the start of classes. After the first class, refunds are processed based on the published refund schedule. Only those courses dropped prior to or during the published Add/Drop period are considered eligible for a refund. Courses dropped after the drop period has ended are considered withdrawals. Refunds are not permitted for withdrawals. Refunds are issued within 2–3 weeks, will appear in the same mode as the original payment, and are subject to a \$25.00 non-refundable fee. For specific refund percentages and policies, please visit the "Certificate & Non-Degree Students" section on our [Tuition Refund Policies](#) page.

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DIGITAL MEDIA & MEDIA ARTS

ART2003: FREEHAND DRAWING

This course uses exercises in still life and figure drawing to expose students to various ways of seeing and of engaging the world through visual representation. Students learn to draw form, objects, and human bodies in their surroundings. Explorations include positive and negative space, edges and contours, and the effects of light and shadow. Students are expected to maintain and develop a sketchbook by drawing from observation at least once a day. Media used might include pencil, charcoal, pen and ink, and pastels.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	4:00-7:00pm	Monday	Aug. 28-Dec. 9

DME2002: DESIGN PERSPECTIVE DRAWING

This course introduces students to both freehand and mechanically generated perspectives. The initial sessions will discuss historical concepts from the renaissance before engaging in plan, elevation and section perspectives. The course will end with the study of alternate vanishing points, and the development of rendered shades and shadows. Students will develop one and two-point perspectives, and interior and exterior views.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	4:00-7:00pm	Tuesday	Aug. 28-Oct. 21
BC	4:00-7:00pm	Tuesday	Oct. 23-Dec. 16

DME2006: WATERCOLOR RENDERING

This course explores drawing with water and color. Students will understand the versatility of water in the selection and mixture of colors. Through various exercises, students will formulate their own creative approach to the medium. Elements of composition and design will be discussed and different techniques will be presented to build presentation skills one step at a time.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC/BC	5:30-7:00pm	Wednesday	Aug. 28-Dec. 9

DME2008: COLORED PENCIL

As an advanced elective at par with Watercolor and Pen & Ink Rendering, this courses feeds from the skills acquired in Freehand Drawing to bring color to the mostly linear views created in the Perspective course prerequisite. Color, lighting, and composition will be discussed before students begin to explore basic and alternative techniques in applying color with pencils to gradually develop rendered views.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	5:30-7:00pm	Wednesday	Aug. 28-Dec. 9

DME2009: ON-SITE PHOTOGRAPHY

This course is intended for designers and other interested individuals to learn, explore and understand the uses, issues and problems of photography in the field. Students will explore photography as a means of documenting and explaining the built environment. Projects may include photographing historic buildings with public and private, interior and exterior spaces. Special techniques such as panoramas and time-lapse photography could be explored for conveying space, flow, and time. Some class meetings will involve field trips and local travel will be necessary to complete photography assignments.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	4:00-7:00pm	Monday	Aug. 28-Oct. 21

DME2021: DIGITAL PORTFOLIO

This course will study the fundamentals of integrating text, typography and images into visual presentations. Students will learn the synergy between Adobe applications like Illustrator, Photoshop, and InDesign and will explore the principles of graphic design, publishing, and electronic file preparation. Students will leave this course prepared to develop a real-life project from concept to a final printed piece.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	4:00-7:00pm	Tuesday	Aug. 28-Oct. 21
BC	4:00-7:00pm	Tuesday	Oct. 23-Dec. 16

DME2022: PHOTOSHOP – DIGITAL IMAGING AND EDITING I

This course is an introduction to digital image editing using Adobe Photoshop. Discussions will begin with basic techniques such as using the toolbox, making and saving selections, photo retouching, applying color, adding text, and using layers. Students will then move into layers, masks, copying and pasting, and digital montages. Exercises in class will be complemented by group discussions of completed assignments.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Thursday	Aug. 28-Oct. 21

DME2023: PHOTOSHOP – DIGITAL IMAGING AND EDITING II

This project-oriented course builds upon the students' basic knowledge of Photoshop to explore a wider breadth of electronic imaging technology and its applications in design. Students are encouraged to use an experimental approach and to stretch the boundaries of the medium. Projects begin with digital image creation using sources such as digital cameras, video frame-grabbing and freehand drawing. As they develop their compositions, students explore manipulation, processing, and editing of the images using diverse programs. The course is intended to question both the aesthetic and technical limits of electronic image-making while building visual and aesthetic skills through frequent critical reviews of projects.

PRE-REQUISITE: DME2022: PHOTOSHOP – DIGITAL IMAGING AND EDITING I **or**
DME2024: PHOTOSHOP: ELECTRONIC IMAGING FOR DESIGNERS

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Thursday	Oct. 23-Dec. 16

DME2024: PHOTOSHOP – ELECTRONIC IMAGING FOR DESIGNERS

This is an introductory course in Adobe Photoshop. Students will apply electronic image editing to adjusting and improving photographs, creating photomontages and merging CAD and photographic elements to create architectural renderings. The course begins with basic techniques such as using the toolbox, making and saving selections, photo retouching and applying color; then moves on to layers, masks, copying and pasting, and digital montages.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	1:00-4:00pm	Friday	Oct. 23-Dec. 16

DME2032: AUTODESK REVIT: 2D AND 3D REPRESENTATION

The Autodesk(r) Revit(r) parametric building modeler is a powerful building design and documentation system for architects, design-build teams, and other building industry professionals. In a parametric building model, every drawing sheet, every 2D and 3D view, and every schedule is a direct representation of information from the same underlying building database. Autodesk Revit offers substantial productivity, quality, and business benefits to designers seeking to improve how they use information technology to do their work.

FULFILLS: Digital Design & Visualization Certificate Required Elective

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	7:15-10:15pm	Tuesday	Aug. 28-Dec. 9
BC	4:00-7:00pm	Thursday	Aug. 28-Dec. 9
CC	7:15-10:15pm	Thursday	Aug. 28-Dec. 9

DME2034: RHINO 1: 3D DESIGN

Rhino is among the most influential software to emerge in the community of academic and professional architectural practice. Due to its efficiency and economy of performance, it is currently in use by numerous design firms small and large. With roots in marine engineering, the target output is digital model construction. The relative strength of Rhino lies in its close command-line relationship with the AutoCAD interface widely in use in the architectural and design industry. This allows the flattened world of two-dimensional construction drawings to be realized in three-dimensional form. Utilizing a minimal number of guide poly-lines, students will construct digital models that range from relatively simple to complex. The mathematical concepts of lofting, sweeping, cutting, splitting, and Boolean operations will be addressed as well as methods of curve construction such as slicing, sectioning, and continuous contours.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

DME2034: RHINO 1: 3D DESIGN FOR LANDSCAPE ARCHITECTURE

This course is an introduction to Rhino 3D modeling software, with instruction and applications focused specifically on the landscape. Utilizing a minimal number of guide poly-lines, students will construct digital models that range from relatively simple to complex. The mathematical concepts of lofting, sweeping, cutting, splitting, and Boolean operations will be addressed as well as methods of curve construction such as slicing, sectioning, and continuous contours. Terrain and topography, site design, development of urban context models, and real-world georeferencing of site information will be among the topics covered in the course.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
BC	4:00-7:00pm	Tuesday	Oct. 23-Dec. 16

DME2037: RENDERING WITH V-RAY

This course is an introduction to the theory and techniques to produce photorealistic renderings using the rendering plugin V-Ray. V-Ray is compatible with several 3D modeling programs including Rhino, Sketchup, Revit, and 3ds Max. Students will learn to apply rendering techniques to create professional, photorealistic imagery and visual effects. This course covers critical V-Ray concepts including materials, textures, lighting, color mapping, reflections, and camera controls. Prior knowledge of 3D modeling software is recommended.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Tuesday	Oct. 23-Dec. 16

DME2042: AUTOCAD 1: 2D DRAFTING

This course in computer-aided drafting introduces the basic concepts and operation of AutoCAD, emphasizing two-dimensional computer-aided drafting concepts, conventions and documentation production. The course provides hands-on instruction in AutoCAD. Students will have to complete weekly assignments, which will require approximately three hours of work to be completed outside of class, plus short readings. This course covers AutoCAD for windows only.

FULFILLS: Digital Design & Visualization Certificate Required Elective

Section IZC will run as a competency-based education (CBE) course. The format will be self-paced.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
IZC (CBE)	Online	Online	Aug. 28-Oct. 21
2ZC	Online	Online	Oct. 23-Dec. 16

DME2045: AUTOCAD 2: 2D SITE PLAN GRAPHICS

This second-level CAD course is for individuals already having a basic knowledge of AutoCAD who desire to explore and extend their expertise focusing on site design graphics. Students will learn about incorporating files from other design consultants and illustrative techniques available in AutoCAD to highlight pertinent information for site plans, sections, and elevations. Additional techniques will be covered in Adobe Photoshop and Illustrator in order to create content for AutoCAD.

PRE-REQUISITE: DME2042: AUTOCAD 1: 2D DRAFTING

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	4:00-7:00pm	Tuesday	Aug. 28-Oct. 21

DME2046: 3D STUDIO MAX 1: MODELING AND RENDERING

This course introduces techniques of modeling and rendering three-dimensional models using 3ds Max. This program generates photo-realistic architectural renderings and simulated fly-by or walk-through used in motion-picture special effects. Lighting techniques, creating atmospheric effects, placing cameras, choosing materials and setting their properties and applying textures will be covered. Assignments culminate in a series of finished renderings.

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Wednesday	Aug. 28-Oct. 21

DME2047: 3D STUDIO MAX 2: RENDERING AND ANIMATION

This is a second level course for individuals already having a basic knowledge of 3ds Max. Topics covered in this course will focus on advanced modeling techniques and visualization workflows. 3ds Max will be used to generate detailed, geometrically accurate 3D models. The V-Ray rendering plugin will be used to generate photo-realistic renderings which depict lighting, materiality, and atmosphere. Techniques of lighting, creating atmospheric effects, placing cameras, choosing materials and setting their properties, and applying textures will be covered. Students may use provided building models for their rendering and animation assignments or may work from models they have built in previous classes. Assignments will culminate in a set of presentation-quality rendered images created using the V-Ray rendering plugin.

PRE-REQUISITE: DME2046: 3D STUDIO MAX 1: MODELING AND RENDERING

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Wednesday	Oct. 23-Dec. 16

DME2063: AUTODESK REVIT: RESIDENTIAL DESIGN

This course will offer an introduction to creating and managing a BIM (Building Information Model) using Autodesk Revit. It will also facilitate in the greater understanding of Building Information Modeling as it pertains to the industry as a whole. Using Revit as a tool, the course will teach the fundamentals needed to effectively produce and manage a “working” BIM, in terms of design and constructability. The course will also teach some finer points of the program and how they can be used to develop the BIM further. Please note: Revit requires the Windows Operating System to run; students will need to have access to Windows in order to use Revit.

FULFILLS: Digital Design & Visualization Certificate Required Elective

Section IZC will run as a competency-based education (CBE) course. The format will be self-paced.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
IZC (CBE)	Online	Online	Aug. 28-Oct. 21
2ZC	Online	Online	Oct. 23-Dec. 16

DME2072: ADVANCED REVIT & COMPUTATIONAL WORKFLOWS

This course will focus on harnessing the power of Building Information Modeling (BIM) as a tool for advanced design and production. The course will explore ways in which BIM allow for accelerated iteration and testing of design concepts, using the power of Autodesk Revit to capture and interpret data which can inform the expression of design ideas. Course material will build on the basics of Revit’s core functionality, including advanced elements such as using the massing environment to iteratively design, understanding the powerful applications of flexible systems and adaptive components, and developing creative techniques to allow models to serve multiple goals within a complex workflow. Underlying elements of integrated project delivery, embedded parametric variability, building data management, and other advanced concepts will support the semester-long design process. Throughout the course, theoretical issues concerning BIM, and its role within the design process will be explored and challenged.

PRE-REQUISITE: DME2032: AUTODESK REVIT: 2D AND 3D REPRESENTATION

FULFILLS: Digital Design & Visualization Certificate Required Elective

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	7:15-10:15pm	Tuesday	Aug. 28-Dec. 9

DME2074: GRAPHIC DESIGN

This course offers students the opportunity to practice the visual problem-solving of graphic design, engaging them in learning modules developed to build upon the core basics (DME 2017), and tailored to complement their concurrent architectural studies. Exercises and discussions will utilize the elements of typography, composition, grid, and the understanding of graphic design as a practice for generating communication-based solutions. Processes will focus on multiple page editorial layout, display, site-specific environmental installation, as well as wayfinding.

PRE-REQUISITE: DME2017: ILLUSTRATION: INFORMATION GRAPHICS

FULFILLS: Digital Design & Visualization Certificate Required Elective

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	TBD	TBD	Aug. 28-Dec. 9

SUSTAINABLE DESIGN

SUS2014: SUSTAINABLE DESIGN AND PRESERVATION

As the art and science of sensitively adapting historic buildings for continued and new uses, preservation is inherently a sustainable practice. Learn how old buildings were built with features that conserve energy and create a comfortable environment. Develop a framework for evaluating energy-saving options for historic buildings and the special considerations they require. Build your knowledge of current best practices in the field regarding windows, insulation, renewables and more. This course will help you design energy improvements that meet historic preservation guidelines whether you're trying to comply with regulatory requirements in a local design review process or federally funded project, or just want to promote the long term sustainability of historic buildings. Discussion topics will include environmental quality, materials selection, and energy rating systems like LEED.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
I ZC	Online	Online	Oct. 23-Dec. 16

SUS2015: THE URGENT AND HOPEFUL FUTURE OF SUSTAINABLE DESIGN

A review of the "cutting edge" of sustainable design including the evolution of mindset, processes and tools required for a sustainable future. Active engagement with the processes and systems of the living world yields: an understanding of wise action, the development of an aesthetic of beauty born from a unity of mind and nature, and the expansion of the context of design beyond the individual building. Examples include: Systems Theory, Integrated Design, Triple Bottom Line, the Precautionary Principle (mindset and process), and LEED, 2030 Challenge, Living Building Challenge, Permaculture, Biomimicry, Life-cycle analysis and Eco-Charrettes (tools).

FULFILLS: Sustainable Design Certificate Required Course

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
I ZC	Online	Online	Oct. 23-Dec 16

SUS2016: GLOBAL PERSPECTIVES ON SUSTAINABLE DESIGN

It didn't all start with LEED. Efforts to reconcile the demands of the contemporary built environment with the demands of the natural world and finite resources have been going on around the world for at least the last fifty years -in some places they have been going on for millenia. For at least the last thirty years, significant green advances in building products, systems, planning and design, and design theory have been going on in Europe, Asia, South America, and Australia-New Zealand as well as in North America. This course will examine the most innovative and exciting green design approaches, projects, policies and programs from around the world. While not all of these are transferable across cultural and geographic boundaries, this course is offered in the belief that as we face the increasingly urgent need to build sustainably, we can all learn from each other. The key lies in global and local solutions.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
I ZC	Online	Online	Aug. 28-Oct 21

SUS2017: SOLAR ENERGY: DESIGN WITH THE SUN

The interaction of buildings and sunlight is rich and complex. This course will examine the many possibilities provided by the sun to power, light and heat our buildings. These possibilities are affected by geographic location, climate, building site, and building form, orientation, fenestration and thermal mass-all of which will be considered. Passive and active solar thermal systems, solar domestic hot water systems and photovoltaics will be studied along with design strategies to prevent unwanted solar gain in climates and seasons when that is a problem. The relative cost and benefits of different solar strategies will also be addressed.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

SUS2023: RESIDENTIAL ENERGY MODELING

Over the past twenty years the development of residential energy modeling software has made it possible to evaluate the energy efficiency -or profligacy- of building designs from the earliest stages of design. Using the evaluative tools provided by the modeling software, designers are able include energy efficiency with aesthetics, function, siting and the many other elements of design as they conceive a building. This course will provide an overview of residential energy modeling, including some historical context of its evolution; an introduction of the most popular energy modeling packages, including hands-on experience with at least one of them; and a discussion of how to make use of energy modeling results. The relationship of energy modeling to green building rating systems will be explored.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

SUS2025: GREEN EXISTING BUILDINGS

The existing building stock is here and much of it is responsible for consuming energy, water and other resources at an unsustainable rate from both the environmental and the economic standpoints. Focusing on non-residential buildings, this course will examine the issues, techniques and processes that are involved in turning these buildings into sustainable consumers, whether through relatively simple retrofits or major renovations. Among the topics to be reviewed will be assessing existing performance, instituting building commissioning, improving energy and water efficiency, limiting (re)construction waste, improving indoor environmental quality, supporting sustainable operations and considering renewable energy sources.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

SUS2029: GREEN PRACTICE: ENERGY AND AIR QUALITY PRINCIPLES

The concept of an environmentally conscious building should take into account energy consumption, the quality of indoor air, and most importantly human comfort. Indigenous strategies that adapt to the rigors of the local climate and contemporary bioclimatic architecture are part of this introductory course to sustainable design. Participants will be introduced to the human needs for comfort and shelter as well as psychrometrics and the physics of heat transfer and heat loss calculations. Building form, orientation, and indoor spaces will also be discussed as they relate to sun, wind, and site, as well as bioclimatic design, passive solar design, natural cooling, and daylighting.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

SUS2035: SUSTAINABLE COMMUNITIES: LAND USE, TRANSPORTATION AND PLANNING

This course will examine how communities across the nation are grappling with such smart growth issues as affordable housing, sprawl, urban revitalization, economic development, transportation investments, and open space protection. These issues are also collectively referred to as sustainable development, growth management or New Urbanism. The course will cover the history of sprawl and current policy debates about land use, urban design, regulation, and public and private investment. The course will feature critiques of specific development projects, tailored to the interests of students.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

SUS2036: MARKETING SUSTAINABILITY

This course offers an introduction to green building marketing. Students will be introduced to the current market for green buildings. Several methods for making the business case for building green will be examined. The course will introduce marketing concepts for professional service firms, including architects and designers, engineers and contractors. We will study a variety of means of differentiating a firm in this growth market, including networking, partnering, positioning and promotion. The course will examine the concept of branding for individuals and firms. Finally, we will discuss the importance of documentation of sustainability performance to support the marketing of green leadership.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

SUS2040: SUSTAINABLE DESIGN OF HEALTHCARE FACILITIES

Greening healthcare projects should be a no-brainer -what building type has occupants more deserving of a healthy space? Unfortunately, when people think of healthy spaces, hospitals are often among the last to come to mind. The intense resource requirements, code constraints, programmatic requirements and institutional culture can make green building a more significant challenge than with other typologies. This course explores the theories and practices of sustainable healthcare design, what it means to create a healthy and healing environment, and how to balance the complex demands of hospitals with those of the natural environment. Topics will include energy and water use intensity, toxicities in building materials, daylighting and opportunities for connections to nature, greening a healthcare campus, use of rating systems, and more.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

SUS2049: DESIGN FOR SOCIAL RESILIENCE

This course introduces students to frameworks for considering and measuring the social impacts of design. Learning goals for the course are:

- Students will gain skills in identifying and assessing urban risk factors around a design project.
- Students will be introduced to the use of mapping techniques in the documentation and analysis of social resilience.
- Students will develop knowledge around identifying and engaging stakeholders.
- Students will study the processes of urban gentrification and its impacts on housing accessibility and equity.
- Students will learn existing guidelines and standards for social resilience including: JUST labeling, Living Building Challenge Equity Petal, LEED pilot credits, SEED Network etc.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

SUS2050: RENEWABLE ENERGY SOURCES

This course provides an overview of renewable energy sources and systems available for the built environment including solar energy, wind power, fuel cells, biomass and geothermal. Students will learn to assess and quantify, at the scale of the district and the site, opportunities and challenges to the use of renewable energy including energy generation potential, economic outcome and environmental impact. Students will also learn how to create a detailed renewable energy profile and action plan.

FULFILLS: Sustainable Design Certificate Required Elective

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

HISTORIC PRESERVATION

HSP2006: ARCHITECTURAL MATERIALS CONSERVATION

This course will introduce students to the distinct physical properties of specific architectural materials and their common deterioration mechanisms. Students will study model deliverables, including case studies, condition assessments, and treatment plans, and develop their own conservation deliverables as course assignments. Students will hone skills in observation, critical thinking, and evidenced-based reasoning while exploring individual architectural conservation projects.

3 Credits, Lecture, \$3,078

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Dec. 9

HSP2009: INTERNATIONAL HERITAGE CONSERVATION

The aim of this course is to examine the world of international heritage conservation practices worldwide. This research based course will start with an overview of international historic preservation and what it means, including the built environment, cultural landscapes and intangible heritage. Then the course will move towards an investigation of major policy and organizations that are involved in heritage conservation on the international level, including UNESCO, ICCROM and ICOMOS. The last third of the course will cover controversial cases in World Heritage and heritage conservation case studies from various countries, ranging from Italy and India to programs here in the United States. The overall goal is to introduce students to new techniques in heritage conservation and placing them in the context of economic development, environmental conservation, tourism and urban growth.

3 Credits, Lecture, \$3,078

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Dec. 9

HSP2010: CULTURAL HERITAGE TOURISM AND PLACEMAKING

Cultural heritage resources and tourism are important tools in the tool box of place-makers, preservationists, designers and economic development planners. A growing and responsible tourism industry can be a catalyst for deepening sense of place, past and community which is the basis for revitalizing local economies. On most days more than two million Americans visit one of the 16,000 museums, heritage and environmental tourism destinations. There is a global tourism beauty contest underway that increasingly divides haves from the have-nots, destinations from pass-throughs, and places that generate buzz from places that get little respect, even from those who live there. The combined forces of globalization and homogenization are forcing cities, states, regions and locales to rethink how they present themselves. Image, while not everything, matters. An attractive user interface together with a coherent and compelling visitor experience based on authentic local content that is the key to generating buzz and the kind of visitor satisfaction that drives word of mouth - the cheapest and most effective marketing technique available. States and municipalities need a comprehensive cultural heritage strategy to build their reputations and sell their features.

This course will examine the history and practice of heritage tourism and the sense of place movement that give it renewed relevance. Topics considered include: the roles played by museums, thematic trails, historic sites, wayfinding and signage, historic preservation, social media and the networks of institutions, advocacy groups and stakeholders that advance the goals of heritage tourism. We'll review and discuss case studies that demonstrate the role of cultural resources in the revitalization of cities and towns. We will also discuss heritage tourism visionaries, the locavore movement, the role of art in placemaking, and the role of social media and digital technology in tourism and placemaking.

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Oct. 23-Dec. 16

HSP2017: ADAPTIVE REUSE AND DEVELOPMENT PROCESS

This course introduces the student to historic building adaptive reuse and the analytical techniques and decision-making processes that shape the certified rehabilitation project. By “certified”, the intent is to meet or exceed the Secretary of the Interior’s Standards and Guideline for Rehabilitation in terms of creating a “synthesis of form” in which a historic property that is listed on or eligible for listing on the National Register of Historic Places is adapted to a new use.

1.5 Credits, Lecture, \$1,539

Section	Time	Day	Dates
1ZC	Online	Online	Aug. 28-Oct. 21

LANDSCAPE ARCHITECTURE

LAN2001: ECOLOGICAL ANALYSIS & CONCEPTUAL FRAMEWORK

This discipline design studio introduces students to the fundamental knowledge and technical skills used by landscape architects to conduct inventory and analysis for projects within the built environment. The studio will use the Greater Boston Area as the focus of inquiry to understand the complexity of natural, economic, and social systems that interact within this urban region. The students will learn to collect, analyze, and synthesize complex data within the design process to inform decisions about land use, development, and infrastructure. This studio will apply the digital communication methods from the Landscape Representation course to draw clear connections between analysis and design. The studio operates in conjunction with Landscape Representation: GIS and Environmental Design, Sessions 1 and 2, but is not limited to this sequence.

3 Credits, Design Studio, \$1,920

Section	Time	Day	Dates
AC	12:30-3:30pm	Monday	Aug. 28-Dec. 16
BC	4:00-7:00pm	Monday	Aug. 28-Dec. 16

MNSI003: BOTANY

This course is an introduction to botany and the evolution of plant science. The course presents students with the various aspects of plant characteristics, from their aesthetic quality to their fuel value at both a micro and macro scale. The emphasis is on traditional and technical knowledge, and will directly complement the existing and vital relationships between plants, animals, and human beings. Field trip explorations will include studies and observations on plant physiology and form, plant ecology, plant communities, and biodiversity, as well as basic plant classification and identification. Understanding plant growth forms, reproduction and dispersal mechanisms will lead to appreciation of horticulture and design. The course will also explore the relationships between native vegetation, invasive plants and managed plantings. The use of basic computer skills is required; digital cameras are encouraged to facilitate documenting fieldwork and diagnostic plant features.

Botany is open to all design students, Landscape Architecture, Architecture, Interior Design and Design Studies, as well as to Landscape Institute and CE students, and will provide the fundamental tools for understanding plant ecology and their value, particularly as being integral elements to today's sustainable design principles.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	4:00-7:00pm	Wednesday	Aug. 28-Dec. 9

MNS2004: ECOLOGY SYSTEMS

Through lecture, discussion and project exercises, this course explores the relationships of ecological communities in diverse environments, the implications of landscape patterns, and how landscape scale affects ecosystem processes from rural to urban. Key concepts of landscape and urban ecological systems are examined through the use of current case studies and local examples. Large management and conservation issues at the landscape scale are also studied as part of a holistic approach to systems thinking.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	4:00-7:00pm	Friday	Aug. 28-Dec. 9

MNS2009: PLANT TAXONOMY

This is an introductory course on the comprehension and proficiency of the taxonomy of plant species. The topic examines plant diversity, functions, and seasonal distinctions, and studies the relationships between plants and their classification systems. Divisions between families and genera, and the preparation and use of analytic keys are explored. Attention is given to woody plant species, including trees, shrubs and vines of North America. ----- Class meets one evening per week PLUS Saturday labs at Arnold Arboretum of Harvard University.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	7:15-9:15pm	Tuesday	Aug. 28-Dec. 9

SSH3007: RESEARCH IN SOCIAL SCIENCE: TOPICS AND METHODS

This course combines social science research survey methodologies with topics in social structures. The course examines bodies of knowledge and evaluates the value from cultural, environmental, and community planning points of view. Students survey literature and design, test, and assess various diagnostic tools for use in evaluating user needs, user satisfaction, and post occupancy assessments for design projects including entire communities and neighborhoods, public parks open spaces, and infrastructure and transit plans. Students have an opportunity to do significant written and on-site research work in the context of urban communities, and to include the physical and social implications these manifest.

3 Credits, Lecture, \$3,078

Section	Time	Day	Dates
AC	7:15-10:15pm	Wednesday	Aug. 28-Dec. 9

SUS2022: SUSTAINABLE PLANTING DESIGN AND PRACTICE

This course addresses technical drawings, design placement and specification standards of plant materials, including considerations for the artistic treatment, planting niche and usage. Students will be asked to develop planting designs for four to five typical planting niches: a doorway garden, a sunny/tropical garden, a shade garden, a bio swale parking lot and a historical garden. Students will provide a working exposure to planting design techniques, criteria, and graphic representation, practice observation skills and critical readings, learn to utilize plant materials and understand various horticultural production techniques.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	7:15-10:15pm	Tuesday	Aug. 28-Dec. 9

TSM2011: MATERIALS AND METHODS: CONSTRUCTION DETAILS, APPLICATIONS AND ADMINISTRATION I

This course highlights landscape construction design and prepares students for detailing elements of constructed urban spaces, both as part of systematic city guidelines and as singular design elements. Contemporary and sustainable approaches and applications, including material selection and resourcefulness, aesthetic quality, durability, cost efficiency and cost-estimating, and construction means and methods are studied.

Lectures, readings and design vignettes expose students to thinking technically about design solutions. In class problems include detail sets pertaining to an entire constructed space that is tangible and measurable. Construction Documents and simple Specifications are studied. Students are expected to participate in field trips to observe built conditions, document and propose improvements; new construction cases are also explored, as is the construction administration process in the field.

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Thursday	Aug. 28-Oct. 21

TSM2012: MATERIALS AND METHODS: CONSTRUCTION DETAILS, APPLICATIONS AND ADMINISTRATION II

This course highlights landscape construction design and prepares students for detailing elements of constructed urban spaces, both as part of systematic city guidelines and as singular design elements. Contemporary and sustainable approaches and applications, including material selection and resourcefulness, aesthetic quality, durability, cost efficiency and cost-estimating, and construction means and methods are studied.

Lectures, readings and design vignettes expose students to thinking technically about design solutions. In class problems include detail sets pertaining to an entire constructed space that is tangible and measurable. Construction Documents and simple Specifications are studied. Students are expected to participate in field trips to observe built conditions, document and propose improvements; new construction cases are also explored, as is the construction administration process in the field.

PRE-REQUISITE: TSM2011: MATERIALS AND METHODS: CONSTRUCTION DETAILS, APPLICATIONS & ADMIN I

1.5 Credits, Lecture, \$960

Section	Time	Day	Dates
AC	7:15-10:15pm	Thursday	Oct. 23-Dec. 16

INTERIOR ARCHITECTURE

HTC2018: CASE STUDIES IN INTERIORS AND FURNITURE

This seminar course uses readings and projects to explore the emergence of interior design as a distinct form of professional practice. Starting from the gradual separation of interior and furniture design from architectural practice in the mid-nineteenth century, students will research the evolution of the discipline in relation to social and technological concerns such as sustainability, globalization, and the profession's emphasis on human factors. Theories and projects that have defined the scope and methods of interior design, particularly since the early 20th century, will be examined in context. The course is open to both bachelors and masters students, but participants in this seminar will be responsible for undergraduate- or graduate-level reading and research assignments depending on their program.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
IJC	Online	Online	Aug. 28-Dec. 9

TSM2007: MATERIALS AND METHODS - IA

In this introductory course students develop an understanding of basic construction materials and assemblies, including foundations, walls, roofs, doors and windows, water protection, and finishes. Through a series of drafting exercises coordinated with the technical matter being presented, students will learn the basics of hard-line technical drawing. Selecting and detailing interior finish materials, including flooring, wallcoverings, ceilings and textiles will be explored. The objective is to enable a student to design more effectively through the understanding of material technology and the process of construction of interior space. Students with prior construction knowledge and drafting experience will be given an opportunity to test out of this class in the first class meeting (and will then have the opportunity to fulfill the 3 credits with Professional Electives).

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	4:00-7:00pm	Monday	Aug. 28-Dec. 9

TSM2014: BUILDING SYSTEMS FOR INTERIORS

Building Systems for Interiors introduces mechanical, electrical, plumbing, life safety and structural systems. The built environment is presented as an integrated synthesis of these systems in support of, and in coordination with the health, safety and well-being objectives of the interior design program. The course presents foundation knowledge for each system through formal principles and hands-on exercises. Students are expected to develop a sustainable approach to the optimization of building systems in balance with occupant needs and external resources.

This course is both online and onsite. The onsite course meetings will be September 9th, October 14th, November 4th and December 2nd.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	9:00am-12:00pm	Saturday	Aug. 28-Dec. 9

TSM2016: COLOR THEORY FOR INTERIORS

Color Theory for Interiors introduces the student to principles, theories and systems for the application of color in the built environment. This course is concerned with understanding the interaction of color with materials, texture, light, and form. It includes an exploration of the physical and perceptual nature of color and the physiological, psychological and emotional impact of color. Color will be considered as an essential element of the design process, and as an effective communication tool in design ideation and presentations. Two and three dimensional exercises and projects will demonstrate the various aspects of color theory and application.

3 Credits, Lecture, \$1,920

Section	Time	Day	Dates
AC	4:00-7:00pm	Tuesday	Aug. 28-Dec. 9