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Whether you are looking to make a difference in the fight against climate change or you want to advance your career by gaining new sustainability related knowledge and skills, this program is for you

**Program Begins:** 

June 2024. Exact Date TBD

**Program Cost:** 

**As low as \$3,030** 

Individual Courses start at \$699

The Executive Program in Design for Sustainability (XDS) is brought to you by the University of Pennsylvania Stuart Weitzman School of Design. The program is created specifically for built environment professionals seeking to elevate their career and increase their design impact by building skills related to designing high performing environmental buildings.

Designed to fit into your busy schedule, this 7-month program features self-paced online learning interspersed with live online meetings with your instructors and a community of curious and motivated design professionals. Gain the high-level skills you need to advance your career without leaving your job and without the cost and time of a full master's degree.

Taught by world class professors from Penn and by industry leaders, you will learn by doing, with coaching from experts along the way. At our live one-day XDS Summit, you will form closer connections with your colleagues, participate in thought provoking discussions, and learn about future trends in sustainable design.

Begin the journey of becoming a leader in design for sustainability now!

# Who is this program for?

The XDS program is for built environment professionals including architects, designers, and allied disciplines seeking to make sustainability a core part of their career.

Architects and interior designers who want to learn more about building science and using building simulation tools.

Project designers, architects and managers who want to incorporate a deeper understanding of building science and validate the performance of their projects using energy modeling, daylighting and embodied carbon assessment into their skill sets.

Firms seeking to build the capacity of their sustainable design team.

# career benefits

- > Gain cutting edge building simulation skills
- $\rightarrow$  Become an expert within the office and become more marketable
- > Position yourself to explore new career opportunities in the burgeoning field of sustainable design
- > At the end of this program, you will be able to:
  - > Understand the building science behind high performing environmental buildings
  - ${\color{blue} > } \ \, \textbf{Perform daylight simulations and interpret the results}$
  - > Conduct and interpret energy models
  - ${\color{blue} \rightarrow \;\; Measure \, embodied \, carbon \, and \, interpret \, the \, results} \\$
  - > Understand the science and design techniques behind Biophillic Design
  - Modify the design of a building to achieve optimum human comfort and environmental performance

# career benefits

### COMPLETING THE XDS PROGRAM EARNS YOU AIA LEARNING HSW UNITS AND CAREER ADVANTAGES.

- > Receive an Executive Program certificate from one of the top design schools in the world
- > Earn up to 22 AIA LUs HSW by completing the entire XDS Program
- > Help your firm build its profile as a leader in sustainable design
- > Gain the career advantage of being an expert in a growing field

### XDS HAS A UNIQUE COURSE STRUCTURE DESIGN FOR OPTIMAL LEARNING.

- > Learn techniques for sustainability applications with step-by-step guides
- > Watch pre-recorded lectures featuring clear explanations of complex building science concepts
- ${\color{blue} > } \ \, \text{Complete targeted assignments that allow you to internalize concepts and apply them in real time}$

### THE LEARNING FORMAT OF XDS IS TAILORED TO THE NEEDS OF WORKING PROFESSIONALS.

- > Check in with instructors in real-time every Saturday and get your questions answered as you move through the courses
- > Spend an average of 6-8 hours per week watching videos, completing assignments, and meeting with colleagues, instructors, and teaching fellows
- > Complete all coursework, assignments, and live interactions outside of the work week
- > Interact with like-minded colleagues from around the world and build your professional network



"For over 35 years at Penn, we have been refining the techniques of bioclimatic design, which provides the foundation for all forms of sustainable design."

William Braham

Instructor, Bioclimatic Design

Director and Professor, Master of Environmental Building Design,

Weitzman School Design



# program schedule

**KEY** 

**Courses** 

**Online Events** 

Live Online Office Hours - Every Saturday

TBD, June 2024	Orientation —— (LIVE/RECORDED, ONLINE EVENT)
TBD	Bioclimatic Design——(6-WEEK ONLINE FOUNDATION COURSE)
TBD	Daylight Simulation Basics——(3-WEEK ONLINE CORE COURSE)
TBD	Energy Modeling Basics —— (3-WEEK ONLINE CORE COURSE)
TBD	Fundamentals of Embodied Carbon—(3-WEEK ONLINE CORE COURSE)
TBD	XDS Summit (LIVE/RECORDED, ONLINE) Guest Lectures from Industry Leaders and Identification of Studio Project
TBD	Electives  > Biophilic Design —— (4-WEEK ONLINE ELECTIVE COURSES)  > Facilitating Co-creative Stakehoder Engagements —— (3-WEEK ONLINE ELECTIVE COURSES)
TBD	Capstone Studio —— (6-WEEK ONLINE CORE COURSE)
TBD	Final Presentations & Graduation — (ONLINE REQUIRED)

# program details

#### COURSES + EVENTS

### To successfully complete the XDS Program, students must complete the following:

REQUIRED COURSES

- > Fundamentals in Bioclimatic Design
- > Daylight Simulation Basics
- > Energy Modeling Basics
- > Fundamentals in Embodied Carbon
- > Capstone Studio in Design for Sustainability

### Students also have the option to take one of the following electives:

- > Biophillic Design
- > Facilitating Co-creatve Stakeholder Engagements

#### COURSE COMPLETION REQUIREMENTS

XDS Learners must complete 80% of all assignments in each course, and successfully complete all the requirements in the Capstone Studio to receive the Executive Certificate.

LIVE ON LINE LEARNING EXPERIENCE

#### > XDS Summit

This is a live, online, day-long event featuring guest lectures, activities, community building and identification of your Capstone Studio Project.

#### CAPSTONE IN DESIGN FOR SUSTAINABILITY

XDS Learners have the opportunity to use a project from their office for the Capstone Studio course, or complete a design project as developed by the XDS teaching team.

#### TECHNICAL REQUIREMENTS AND PROFECIENCIS

The XDS Program requires the use of a PC (We can support the MAC OS platform). Contact **des-xds@design.upenn.edu** to discuss the best way to use a MAC.

- Learners must have access to one of the following software applications: AutoDesk Revi, Rhino, or Sktechup.
- The learners must be able to manipulate the software at an intermediate level to be successful in this program.
- Learners will need to download additional free applications and therefore must have administrative rights on their computer to successfully install the applications, or have a technical support department willing to install the packages.
- For a complete list of required software and hardware requirements, visit **des-xds@design.upenn.edu**

The program features
the XDS Summit event
that connects the cohort
and includes guest
speakers sharing the
latest developments in
sustainable design

This is an optional live, online event that includes guest lectures, community building, and identification of a Capstone Studio Project.

## foundation course

### XDS 101 Fundamentals of Bioclimatic Design: Techniques for Architectural Innovation

### Willam Braham



In this online course, we will explore innovative techniques of environmental building design with an emphasis on the fundamental concepts of climatology and building science.

6-WEEK ONLINE FOUNDATION COURSE | 6 AIA LEARNING UNITS HSW

START DATES: NOV. 4, 2023 AND JUN. 6. 2024 | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### Course Schedule and Learning Objectives

#### WEEK 1: BIOCLIMATIC INNOVATION

- Understand and apply the principles of human thermal comfort.
- > Understand and apply the principles of bioclimatic design.

#### WEEK 4: BIOCLIMATIC INNOVATION

Understand the ability of different materials to absorb heat and analyze their role in the dynamic regulation of interior temperatures and Calculate the thermal time constant of a building and its effect on comfort and energy consumption.

### WEEK 2: ENCLOSURE

- > Understand the evolution of building enclosures and their role in the thermal behavior of different building types.
- Analyze and interpret the insulating properties of materials in building construction assemblies
- Analyze and interpret the elements of building heat loss.

#### WEEK 5: CLIMATE RESPONSIVE BUDLINGS

> Understand and analyze the powerful effect of ventilation and shading on interior temperatures and Explore and interpret the effect of different control settings on building temperatures. And Analyze and interpret the combined effect of lossiness, glazing, thermal mass, ventilation, and shading in four different climates.

#### WEEK 3: SELECTIVE ENCLOSURES

- Understand the power of glazing to selectively filter environmental resources.
- Understand and analyze the different properties of glass.
- > Understand the interaction of heat loss and solar gain through glazing on interior temperatures.

#### WEEK 6: ENVIRONMENTAL RESOURCES

> Understand the thermal potential of differet environmental resources—sun, rain, wind—and of different environmental reservoirs-- air, sky, moisture, and ground temperatures.

### core course

### **XDS 102 Daylight Simulation Basics**

Janki Vyas



Early-phase design decisions made by architects and designers have an everlasting impact on a building's embodied carbon, lifetime operational energy use, and daily comfort for building occupants. While modern buildings with all glass facades meet aesthetic preferences, more glass doesn't necessarily mean better daylighting. Large spans of glass poorly oriented require additional materials for shade and glare control, which in turn requires heavier structural systems, increasing not only overall building cost but also its embodied carbon. High window-to-wall ratios also contribute to harmful energy loss/gain through the envelope which requires larger mechanical systems that run for longer periods of time to maintain thermal comfort. Daylight simulation-guided design helps architects and designers identify problem areas in a design to reduce materials, cost, and operational energy use; all while increasing occupant comfort.

3-WEEK ONLINE CORE COURSE | 3 AIA HSW LEARNING UNITS

MULTIPLE START DATES | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### **Course Schedule and Learning Objectives**

### WEEK 1: DAYLIGHTING FUNDAMENTALS

- > Explain how light is measured and how it is stimulated
- Understand key industry drivers and benefits of daylight simulation
- Identify appropriate daylighting and shading design strategies for different orientations and massing.
- Select appropriate tools for simulating daylight

### WEEK 2: DAYLIGHT DESIGN: GEOMYTRY AND RADIATION

- Formulate precise simulation questions for design industry
- Execute iterative sunlight, shading, and solar radiation analysis to evaluate design parameters.
- Compare and contrast results from early design phase studies to arrive at an optimal design solution

### WEEK 3: DAYLIGHT DESIGN: QUALITY AND OUANTITY

- Define units of measurment for daylighting quantity and quality
- > Execute daylight quantity simulations for points in time and annually.
- Evaluate daylight simulations to identify areas of darkness, excessive brightness, and adequate lighting
- Design architectural solutions for problem areas revealed by daylight simulation.

### core course

### **XDS 103 Energy Modeling Basics**

Rufei Wang



Inevitably, energy issues and climate change are moving to the forefront in the 21st century. With buildings responsible for about 40% of energy consumption in the United States, architects can and should find solutions facing environmental and energy challenges. The AIA 2030 Commitment encourages energy modeling of every whole-building project. However, when modeling is performed in the later design phases once key design decisions are made, the value of modeling is minimal. Integrating energy modeling in the early design process is essential to help architects make informed design decisions to minimize buildings' energy consumption. This course will cover the fundamentals of energy modeling including the protocols, process and workflow. The attendees will gain a practical understanding of early-phase energy modeling through prepared example models and understand how to identify energy efficiency opportunities in the early design phase.

3-WEEK ONLINE CORE COURSE | 3 AIA HSW LEARNING UNITS

MULTIPLE START DATES | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### **Course Schedule and Learning Objectives**

### WEEK 1: ENERGY MODELING FUNDAMENTALS

- Vinderstand the purpose and benefit of energy modeling.
- Understand key definitions, terms, and concepts of energy.
- Understand how energy modeling can be integrated in the design process, identify energy efficient opportunities in the early design phase.
- Understand different baselines and targets;
   AIA DDx platform and reporting.

### WEEK 2: ENERGY MODELING WORKFLOWS AND PROCESSES

- Understand key drivers affecting energy consumption of buildings.
- Describe the process of energy modeling, including the inputs and assumptions.
- Interpret the energy model outputs and understand how different elements and systems are interrelated to energy consumption.

#### WEEK 3: ENERGY MODELING APPLICATIONS

- Understand key drivers affecting energy consumption of buildings.
- Describe the process of energy modeling, including the inputs and assumptions
- Interpret the energy model outputs and understand how different elements and systems are interrelated to energy consumption.
- > Understand currently avaliable energy modeling software, limitations and appropriate use.

### core course

### **XDS 104 Fundamentals of Embodied Carbon**

Kayleigh Houde



With the built sector's responsibility for nearly 40% of global carbon emissions, there is pressure and urgency to drastically reduce both the embodied and operational carbon in the buildings that we design as architects and engineers. By gaining literacy around embodied carbon and life cycle assessment, as well as understanding the motivations that we have created as an industry, we could allow designers to navigate the complexities of this topic. This course will endeavor to embed both literacy and the ability to analyze embodied carbon in everyday design decisions, allowing us to move closer to science-based climate targets.

3-WEEK ONLINE CORE COURSE | 3 AIA HSW LEARNING UNITS

MULTIPLE START DATES | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### **Course Schedule and Learning Objectives**

### WEEK 1: EMBODIED CARBON FUNDAMENTALS

- Learn key terminologies surrounding whole life carbon and building life cycle assessment.
- > Understand industry motivations for reducing climate impacts.
- Understand Environmental Product
   Declarations as the key points of information
   for product environmental impacts.
- > Learn how to navigate Environmental Product
  Declaration databases.

### WEEK 2: EMBODIED CARBON PRODUCT ASSESSMENTS

- Learn how to calculate embodied carbon and compute the embodied carbon of building elements.
- Learn how to use EC3 to find North American
   Environmental Product Declarations.
- > Implement embodied carbon knowledge in variety of reduction scenarios.

#### WEEK 3: EARLY-STAGE LIFE CYCLE ASSESSMENT

- Understand industry scopes, categories and life cycle assessment inclusions.
- Learn about the variety of industry tools available for assessing embodied carbon.
- > Learn to use Kaleidoscope and EPIC tools for earlystage carbon estimates.
- Learn best practice for constructing Revit models that are easily used in Life Cycle Assessment.

# elective

### XDS 105 Biophillic Design: Science, Patterns, Process of Design for Health and Well-Being

Helena van Vliet



Is the design of the built environment a healthcare profession? Evidence suggests that it is. This course explores the science, patterns, and process of salutogenic design, innate human spatial preferences, their evolutionary origins, purpose, and relevance in meeting today's interconnected environmental and health challenges. Current research from evolutionary biology, cognitive neuroscience, biopsychology, and chronobiology informs biophilic interventions, where design for cognitive ease and perceptual fluency reveals itself as the most viable path to sustainability within the range of homeostatic resilience. Participants will create 'well-being habitats' in synch with hard-wired physiological preferences.

4-WEEK ONLINE CORE COURSE | 3 AIA HSW LEARNING UNITS

MULTIPLE START DATES | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### **Course Schedule and Learning Objectives**

WEEK 1: THE SCIENCE OF WELL-BEING PLACES

- Understand current research from evolutionary biology, cognitive neuroscience, and biopsychology that informs salutogenic design.
- what is 'Well-Being?' Explore ancient human place patterns that support the physiological experience of 'shelter,' cognitive ease, and perceptual fluency in synch with innate evolutionary preferences. We will discuss the dual nature in which mid-range fractals and spirals benefit our neurobiology, and touch on the importance of 'engaged edges.'

WEEK 2: EMBODIED COGNITION

- Understand 'Embodied Cognition' and the sensory components of restorative design in support of the parasympathetic nervous system
- We will dive deeper into restorative' place-ingredients' including the physiological need for all-sensory design: dynamic diffused daylight, acoustic, haptic, and olfactory well-being, design with water, the essential experience of darkness, and benefits of negative air ionization.

### WEEK 3: BIOPHILIC ELEMENTS AND PATTERNS

- Identify key Biophilic Elements and Patterns representing innate human spatial preferences, their evolutionary origins, purpose, and relevance in optimizing physiological and cognitive restoration, reducing inflammation, and strengthening immune response.
- We will explore the full spectrum of Biophilic Elements and Patterns, including the physiological relevance of the 'Sanctuary' Pattern,' 'Mystery/ Exploration/Discovery,' and the important public health benefits of designs that engage 'Awe.'

WEEK 4: MICRO-HABITAT BUILDINGS

- Understand the connection between biophilic design, resilience, passive survivability, biodiversity, and public health.
- Apply innate human well-being patterns and principles to design a biophilic intervention of your choice.

# elective

### XDL 105 Facilitating Co-Creative Stakeholder Engagements

### **Rob Fleming**



In this course, students will learn how to develop and deliver a co-creative stakeholder driven design process that features authentic stakeholder engagement for design projects, products and processes. Special emphasis will be placed on the important role of cultural humility, meaningful relationships, principles of transformation and design thinking techniques. The lessons learned in this course can be directly applied to the design charrette process used for co-creative sustainable design.

3-WEEK ONLINE CORE COURSE | AIA UNITS PENDING REVIEW

MULTIPLE START DATES | VISIT THE COURSE WEBSITE FOR START DATES AND MORE DETAILS

### **Course Schedule and Learning Objectives**

### WEEK 1: FOUNDATIONS FOR CO-CREATIVE STAKEHOLDER ENGAGEMENTS

- Organize thinking across time by recognizing world view sifts
- Organize thinking across space from micro to macro scale
- > Recognize and value multiple truths
- > Understand Co-creation and the importance of > stakeholders
- Understand transdisciplinary design and transformational teamwork

### WEEK 2: PREPARING FOR THE CO-CREATIVE PROCESS

- > Recognize emerging design processes
- Apply techniques for connecting to stakeholders
- > Recognize different forms of interaction
- > Create shared guiding principles
- Organize the collaborative goal setting process
- Recognize the steps in planning for the engagement

### WEEK 3: DELIVERING THE CO-CREATVE STAKEHOLDER ENGAGEMENT

- > Apply key facilitation techniques
- > Present the event + ground rules
- Present the Information download
- > Organize and facilitate the Ideation Session
- > Organize and facilitate the Vetting Session
- Recognize the typical steps beyond the engagement

# captone

### XDS 106 Capstone Studio in Design for Sustainability

### **Rob Fleming**



The best way to learn how to use simulation tools early in the design process is by using them on an actual design project. In this 4-week mini-design studio, you will apply the lessons learned from all the previous classes in the XDS program onto a project from your office or one that is provided to you by the XDS program. The course begins by reviewing the basics of bioclimatic design prior to the development of multiple design ideas and with the development of design goal for the project. A number of design ideas will be created and then validated using a range of digital simulation tools. The design project will be further refined, and validated. The course ends with learners developing effective presentations that explain how you arrived at the final design and how the simulations shaped the design decisions.

4-WEEK ONLINE CORE COURSE (PRE-REQUISITES: XDS 101, 102, 103 & 104)
AIA LUS SUBMITTED AND PENDING APPROVAL

### **Course Schedule and Learning Objectives**

WEEK 1: SETTING UP THE DESIGN PROJECT AND PROCESS FOR SUCCESS

- Review the basic principles of bioclimatic design
- Review the best practices for using simulation tools early in the process
- Select Goals, baselines, metrics, and targets
- Select the appropriate tools for early analysis

WEEK 2: GENERATING MULTIPLE DESIGN IDEAS

- Frame the different design solutions to be tested
- > Execute the design ideas
- Generate daylight, carbon and energy analysis
- Select the ideas that best meet the preestablished goals and targets for the project

WEEK 3: DESIGN DEVELOPMENT

- Develop a design to meet the goals based on results from early analysis
- Generate a 'final' design validation of the early design idea

WEEK 4:
PRESENTING THE PROJECT

- Develop a coherent
   presentation for a range of
   audiences
- Present the results of early design validation in a compelling and effective manner

### The XDS Program offers:

A more affordable program than many other executive education programs

Thought provoking discussions about future trends in sustainable design.

Ideal for the busy design professional. Stop and start when needed

Online courses with weekly content plus live events and discussions to connect with others

Ability to connect and network with a diverse community of design professionals facing similar challenges Certificate of completion from the University of Pennsylvania Weitzman School of Design

Courses taught by Weitzman faculty and industry experts New tools and frameworks that will help you promote sustainability in your organization Hands-on experiences to test what you are learning in real time

# a program like no other



### **William W. Braham** *Founding Instructor*

William W. Braham, PhD, FAIA is a Professor of Architecture at the University of Pennsylvania, where he previously served as Department Chair and Chair of the Faculty Senate, and is currently Director of the Master of Environmental Building Design and of the Center for Environmental Building + Design. He has worked on energy and architecture for over 35 years as a designer, consultant, researcher, and author of numerous articles and books. His most recent projects include energy and carbon plans for Nakashima Woodworkers and Chautauqua Institution and building performance modelling for Daikin Open Innovation Lab, Silicon Valley.



Janki A. Vyas is the principal of a design and building performance consulting firm, KARMA co/lab, which specializes in evidence-based design and environmental performance. She is also currently a lecturer at the University of Pennsylvania where she teaches architects and designers workflows for integrating daylight and building simulation into the design process. She's previously taught at Temple University and in the Master of Science in Sustainable Design (MSSD) program at Thomas Jefferson University's East Falls campus.

# core faculty

### TBD Faculty Instructor

TBD



### Helena van Vliet, AIA Faculty Instructor

As Born and raised in Aachen Germany in a family of architects and builders, Helena made her way to the US at the age of 20 and eventually found her home in Pennsylvania. She holds a Master of Architecture from the University of Pennsylvania and a Bachelor of Science (Vordiplom) in Architecture from the RWTH in Aachen, Germany. Helena is the mother of two precious young adults, and a licensed architect in the U.S. as well as in Germany. A lifelong student of Nature's restorative powers, Helena first took to the solace of a garden following her beloved younger brother's death in childhood. For more than 30 years she has devoted her professional life to the design of places that heal by reconnecting people with Nature; places that make people - and animals, plants, and pollinators - especially her favorite bumblebees - feel sheltered and at home. In a parallel process of ongoing research in evolutionary biology, cognitive neuroscience, photobiology, and biopsychology (to name but a few) Helena has deepened her understanding of the design ingredients essential for well-being places, the elements & patterns embedded in the places we love.

# core faculty



Kayleigh Houde is the Global Computational Projects Lead for Buro Happold where she works at the intersection of engineering, sustainability and computational design. Kayleigh is a founding member and co-chair of Carbon Leadership Forum's MEP 2040 Challenge, an ASHRAE Building Decarbonization Task Force member, and has taught Parametric Life Cycle Assessment at the University of Pennsylvania.



### Rob Fleming, AIA, LEED AP, NOMA, Founding Program Co-Director

Rob Fleming is an award-winning educator, author, keynote speaker, sustainability advocate, and architect. Rob is the Director of Online Innovation at the University of Pennsylvania's Weitzman School of Design, and he is the Faculty Director of the Design Leadership Program. From 1996 to 2021, Rob served as the Founding Director and Professor for the award-winning Master of Science in Sustainable Design Program at Thomas Jefferson University, where he taught hundreds of emerging sustainability professionals who have made important contributions in the world. Rob works with clients and design firms around the country to facilitate integrative design charrettes using co-creative, stakeholder driven design processes. In this way, built environment projects reach higher levels of sustainability and the design teams themselves develop stronger bonds through a shared sense of purpose. Rob holds a Master's in Architecture from Virginia Tech and a Bachelor of Architecture from Temple University. Rob is also the 2022 Philadelphia AIA President Elect.

# core faculty

# key dates & payment info

#### **APPLICATION DUE DATES**

Applications open	April, 2024
Early application deadline	September 21
Regular application deadline	May 15, 2024
Final payment deadline	June, 2024
First class begins	June, 2024

The Program Schedule on page 9 contains all the important dates including the start of the program and the date of the optional XDS Summit.

#### **COSTS & PAYMENT SCHEDULE**

No application fee		
Non-refundable enrollment deposit is required to confirm your spot	\$950 Counted towards enrollment fee	
Early enrollment, full program fee	\$3,030	
Regular enrollment, full program fee	\$3,565	
Stand Alone Courses	\$699	
The cost of the full program when one stand-alone course is taken at a time	\$4,200 (6 courses in total)	

### **Payment Details**

Deposits and fees are payable by credit card only; all balances are due by the dates listed in the Application Date chart above. Participants are responsible for home computing needs.

### **Payment Plans**

Limited payment plan options are available. After submitting the deposit, balances may be split into two staggered payments. Contact **des-xds@design.upenn.edu** to learn more about this option.

### How will my application be evaluated?

We want to hear your story, your hopes and dreams and what you want to accomplish in your career. We are looking to learn about you, what you're passionate about, what you want to learn and why. Whether you're looking to grow your current organization, want to transition into a new role, or you're trying to have the time and space to reboot and consider what's next, be honest about where you're at in your journey. We hope that the application process might serve as a reflective practice for you to step back and articulate what you're hoping to accomplish. If you have questions about admissions, please don't hesitate to reach out to des-xds@design.upenn.edu so we can discuss.

### Are there any prerequisites to apply?

No, there are no educational prerequisites to apply for this program — we are looking for leaders across all industries with a variety of perspectives.

If you have questions, please don't hesitate to reach out to **desxds@design.upenn.edu** so we can discuss your questions.

### What is the program director looking for in my application?

There are no application fees and the application itself should not take you longer than 30 minutes to complete. The application requests some basic background information about yourself, a resume upload, and responses to three very short (<250 words each) essay questions. Just be yourself as you compose your application. Our faculty are looking forward to reading your story.



### What is the summit event?

The optional online live summit will provide an opportunity for you to solidify relationships with other members of the community to share ideas and build connections that facilitate learning throughout the program.

Our optional Summit occurs at the midway point of the program and features opportunities to practice and demonstrate the skills you have learned in the program in a safe, supportive space.

A key aspect of the Summit will be the identification of your Capstone Studio Project. You will meet with the program director and instructors to learn more about the specific challenges and projects within your office. Specific recommendations and advice will be provided to you at the event.

### Are financial aid or scholarships available?

Our program is designed to have the lowest tuition possible without losing the integrity of the educational experience. We're proud to say it's one of the most affordable executive programs available today. Since the program tuition is already being offered at a discounted rate relative to other similar programs, we're unfortunately unable to offer any scholarships. Previous students have gotten partial or full tuition covered from their employers as well, and we also encourage students to crowdfund if possible. If you have questions about finances, please don't hesitate to reach out to des-xds@design.upenn.edu so we can discuss. Weitzman alumni qualify for an additional \$500 scholarship. This is a one time offer and will not be offered again for this program after the 22–23 session.

### Is there a payment plan option?

Limited payment plan options are available. After submitting the deposit, the remaining balance may be split into two staggered automated payments. Contact us at des-xds@design.upenn.edu\_for further details.



### How much time will the work take?

We anticipate that most students will spend about 6–10 hours per week on the program, but this may vary. The program is a part-time program that is designed to be taken alongside, and complimentary to, your existing professional responsibilities.

### How often are online course materials released?

We release materials on a weekly basis. Once released, the materials will remain available for the duration of the program. All assignment submission due dates are in eastern time zone.

### What type of projects will we do?

The Weitzman team uses the latest approaches to engaging students in the online space with a variety of types of assignments including readings, discussion boards, reflective writing, simulations, experimentations in the real world and more. All the learning acquired in the program will be applied to your Capstone Studio Project where students will work with Teaching Fellows and Instructors to identify and define a design challenge to work on. Then students will move on to ideate and prototype possible solutions with a final project that will be suitable for presentation to the leaders of your design process.

### Live Interactions:

We host live weekly office hours every Saturday from 10 am to 12 pm EST. The XDS program will have teaching fellows, graduate students and instructors there to assist you with completing your assignments. We encourage you to set aside Saturdays to complete homework assignments, as this will increase your chances for success in the program.



### Technical Requirements

The XDS Program features a wide array of software application that will require minor purchases of specific applications, installing of trial versisons of some software packages, and the use of free web apps. This will require administrative control of your laptop or coordination of your IT team to make the necessary install.

The primary software platforms used in this course will be: Autodesk Revit and Rhino. Free trial software for Rhino will be avaliable during the program. MAC users should contact the program director at des-xds@design.upenn.edu.

The first Saturday of every month will feature an orientation and assistance with loading all of the software necessary for completing each course.

### What is the refund policy for the XDS Program?

The tuition deposit is not refundable. Weitzman online will receive request for refunds to non-credit programs in writing only to the appropriate program leadership. The Weitzman School of Design reserves the right to cancel any program due to low enrollment or other extenuating circumstances at any time, before the start of the program. If a program is canceled, all participants will receive a full refund.

Official communications may be sent to des-xds@design.upenn.edu



### Can I receive AIA Learning Units for the courses?

The Weitzman School of Design at the University of Pennsylvania is a registered provider of AIA-approved continuing education under Provider Number 10009226. All registered AIA CES Providers must comply with the AIA Standards for Continuing Education Programs. Any questions or concerns about this provider or this learning program may be sent to AIA CES cessupport@aia.org or 800-AIA- 3837, Option 3).

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"This program helps you to understand building science, apply software tools to study different design solutions, and to bring it all together in a capstone studio experience."

Rob Fleming, AIA, LEED AP, NOMA

Co-Director for Design for Sustainability

Director of Online Innovation

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