DESIGN & ENVIRONMENTAL ANALYSIS (DEA)

DEA 1050 - Design Your Life: Career Explorations (1 Credit)
Survey course for students interested in careers that influence habitat and human behavior. Careers may include employment in the fields of design (user experience design, interaction design, interior architecture, etc.), design strategy and consulting, ergonomics, facility planning, business, and real estate. Experts and young alumni representing these disciplines discuss their work while addressing current issues, trends, key skill sets, and career opportunities (especially those favoring the knowledge and skill sets that the curriculum of Design and Environmental Analysis supports to develop).
Enrollment Information: Enrollment preference given to: DEA majors.
Last Four Terms Offered: Fall 2023, Spring 2023, Spring 2022, Spring 2021
Learning Outcomes:

- Become familiar with the fields of academic study, research and career opportunities related to the design, planning, management and assessment of the built environment and the human experience within.
- Explore their own academic interests, skills and expectations.
- Expand their awareness of career opportunities related to their academic interests, and use the information to help plan curriculum and extra-curriculum experience more effectively.
- Participate in dynamic dialogue with experts and alumni invited to guest lecture in the class.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1100 - Design Generation(s) (3 Credits)
In this three-week session, students will learn how designers think, solve problems, and improve our world. The need for critical thinkers is great and this course will enable students to better understand the world and their role in creating a more humane and sustainable future. The course also introduces design methodologies for creative thinking and practice design skills: sketching, modeling, prototyping, graphics, exhibition design.
Last Four Terms Offered: Summer 2025, Summer 2024, Summer 2023, Summer 2022
Learning Outcomes:

- Develop literacy in design visualization and graphic communication.
- Develop skills in a variety of visualization techniques for effective communication.
- Develop skills for critical thinking and quantitative literacy, visual literacy and analysis, capacity to create knowledge.
- Reflection on professional practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1101 - Visual Literacy and Design Studio (4 Credits)
Crosslisted with VISST 1101
This course is an introductory design studio. The primary course objective is to introduce principles of visual literacy as it pertains to two-dimensional and three-dimensional issues in design at all scales. Concepts about representation, expression, composition, color, form, light, structure, and function will be explored through project based learning. The emphasis will be on learning explicit compositional concepts, visualization skills, and media techniques as well as implicit design sensitivities to serve the student throughout the rest of his or her DEA experience and beyond.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Develop grounding in the field through the learning 2D and 3D design principles both in theory and in practice (comprehend discipline and field).
- Investigate a number of disciplinary perspectives including painting, typography, mathematics, engineering, architecture, product design, and interiors in the studio projects (apply multi-disciplinary perspectives).
- Apply explicit concepts to creative original works to learn the connections between knowledge, research, and design (think critically).

Schedule of Classes (https://classes.cornell.edu/)

DEA 1110 - Making a Difference by Design (3 Credits)
Crosslisted with COGST 1111
This course provides a broad overview of design applied various disciplines, scales, and problem contexts, and how design can offer an alternative, and often more human-centered perspective towards solving the problems around us. With a focus on designing with a human-centered mindset in this age of technology, we will examine topics on the role of design in wearable computing, virtual and tangible interfaces, robotics to biology. We will also apply the lens of design to issues on sustainability, healthy environments, diversity and inclusion, and designing for social good. Each week, through case studies and familiar examples, DEA 1110 explores how designing is part of every discipline.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Course Fee: Materials Fee, $50.
Exploratory Studies: (CU-CEL, CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Winter 2022
Learning Outcomes:

- Comprehend disciplines and fields, develop an understanding of design applied across a wide range of disciplines to make a difference, and learn to appreciate design at different scales and applied across problem contexts.
- Apply multi-disciplinary perspectives, identify and examine the relationship between design, technology, and other disciplines, and proactively apply interdisciplinary and transdisciplinary perspectives to problem-solving.
- Write, speak, and use visual communications effectively, demonstrate the ability to develop and communicate one's creative ideas effectively through writing, visuals, and tangible prototypes.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1112 - Change-making: Designing Healthy and Hospitable Environments (3 Credits)
Crosslisted with COGST 1112
Designing Human-Centered, Healthy and Hospitable Environments is a three-week course examining design innovations and some impacts on management/operations in hospitality, communication, business, healthcare, and senior housing. During this course students will learn how design impacts organizations and every aspect of daily life. Using case studies, familiar examples, and interactions with a variety of leaders from design, healthcare and hospitality fields, students will engage with design thinking and explore new career pathways.
Distribution Requirements: (SBA-AG)
Last Four Terms Offered: Summer 2025, Summer 2024, Winter 2024, Summer 2023
Learning Outcomes:

- Understand the relationship between health, hospitality, and design.
- Identify characteristics of service design.
- Commit to design excellence and socially responsible design.
- Explain basic ideas involved with the process of design thinking .
- Describe some ways hospitality ideas can improve the design of services in healthcare.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1140 - Principles of Design Computing (3 Credits)
Crosslisted with FSAD 1140
The course will cover foundational skills and best practices for design communication in terms of the underlying principles of computing technologies. This course will help students become versatile in utilizing various approaches and tools for tasks in Design and Environmental Analysis (DEA) and Fiber Science & Apparel Design (FSAD) programs. The first module will cover the foundations of 2D graphics and technical drawing. The second module will be an introduction to 3D modeling and rendering. Each module will start as one class with a focus on general principles and will be followed by the class dividing into two sections for applications specific to DEA and FSAD programs. The final module will include an introduction to Generative Artificial Intelligence techniques as a part of a collaborative final project where students will work in multidisciplinary teams to design, curate, and propose an exhibition (DEA) for a fashion collection (FSAD). Through lectures, class activities, homework and projects, the course will help students build confidence in digital design skills and be encouraged to explore further on their own.
Last Four Terms Offered: Summer 2025, Spring 2025, Fall 2024, Summer 2024
Learning Outcomes:

- Foundational skills in 2D and 3D digital media for design communication.
- Critical thinking in design communication.
- Put principles and elements of design into practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1150 - Design Graphics and Visualization (4 Credits)
This course immerses students in the act and art of design communication. Students focus on a series of exercises covering both manual and digital visualization techniques to effectively present and communicate ideas to oneself and others. Students will become experienced with Adobe Suite (Photoshop, Illustrator, InDesign), AutoCAD, SketchUp and Revit software applications in addition to manual hand skill development (sketching, drafting, rendering).
Enrollment Information: Enrollment preference given to: DEA undergraduate majors. Outside majors require permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Apply a variety of visualization skills and techniques for effective design communication.
- Use sketches and renderings as design and communication tools using both manual and digital media.
- Produce competent presentation graphics across a range of tools.

Schedule of Classes (https://classes.cornell.edu/)

DEA 1500 - Introduction to Environmental Psychology (3 Credits)
Crosslisted with COGST 1500, PSYCH 1500
Environmental Psychology is an interdisciplinary field concerned with how the physical environment and human behavior interrelate. Most of the course focuses on how residential environments and urban and natural settings affect human health and well-being. Students also examine how human attitudes and behaviors affect environmental quality. Issues of environmental justice and culture are included throughout. Hands-on projects plus exams.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (D-AG, SBA-AG), (D-HE, LAD-HE, SBA-HE), (SSC-AS)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Summer 2025, Fall 2024, Summer 2024, Fall 2023
Learning Outcomes:

- Provide overview of knowledge about the environment and human behavior (grounding in field).
- Understand cultural and life course diversity in human-environment interactions (sensitivity to diversity).
- Learn how to analyze problems like an environmental psychologist (develop critical thinking skill).

Schedule of Classes (https://classes.cornell.edu/)

DEA 1501 - Introduction to Environmental Psychology - Writing in the Major (4 Credits)
Crosslisted with COGST 1501, PSYCH 1501
Human-Environment Relations is an interdisciplinary field concerned with how the physical environment and human behavior interrelate. Most of the course focuses on how residential environments and urban and natural settings affect human health and well-being. Students also examine how human attitudes and behaviors affect environmental quality. Issues of environmental justice and culture are included throughout. Hands-on projects plus exams. Lecture and discussion sections. WIM section attends a regular lecture but also meets weekly with a graduate writing instructor. The two principal objectives of WIM section:1. More in depth discussion and analysis of the materials covered in the course.2. On going, systematic opportunity to improve your writing and presentation skills.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (D-AG, SBA-AG), (D-HE, LAD-HE, SBA-HE), (SSC-AS)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2020
Schedule of Classes (https://classes.cornell.edu/)

DEA 2020 - Introduction to Sustainable Design (3 Credits)
This course introduces the histories, concepts, and frameworks that underlie our understanding of sustainability and how they are shaping environmentally conscious design practices - explored through an investigation of materials, processes, products, practices, and material culture. We utilizes exploratory, participatory, and open-ended learning methods to facilitate design inquiry and propose a more environmentally and socially just future.
Enrollment Information: Enrollment preference given to: DEA undergraduate majors.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- To understand the historical contexts in which the post-industrial concept of sustainability emerged, and its contemporary use as a cross-disciplinary term.
- To understand the underlying physical and social science components that define sustainability on a global scale.
- To explore both the practical and theoretical discourses and actions that shape sustainable design practices.
- To investigate systems of contemporary material culture production using design research and analysis methods.
- To explore, develop, and deploy graphic techniques of information visualization and narrative communication to generate accessible and informative presentations.
- To work effectively with others across multiple disciplines and contribute to critical class discourse and collaborative research.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2025 - Impactful Graphics: Visual Communication for Social Impact (3 Credits)
This course provides a foundation in graphic design to communicate ideas and create impact. This course encourages students to engage with the visual language of design through experimentation, exploration and iteration, connecting action (making visual form) to reflection (looking and thinking). It will require students to reflect upon the relationship between form-making and meaning-making as well as to consider the ethics of graphic design and its impact on society. Students will work in two dimensions by hand and with the digital tools of the Adobe Suite (Illustrator, InDesign and Photoshop).
Prerequisites: DEA 1101, DEA 1150/DEA 1140, and DEA 1500.
Enrollment Information: Priority given to: DEA undergraduate majors who have completed 1000-level CORE courses, including DEA 1101, DEA 1150/DEA 1140, and DEA 1500 with minimum grades of B-. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (CA-AG, D-AG), (CA-HE, D-HE, LAD-HE)
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- By the end of the semester students will be able to use visual communications clearly and persuasively to reach audience and goals, recognizing its potential to influence society.
- Students will become familiar with the main principles, tools, techniques and issues of graphic design. Students will be able to make and manipulate form in two dimensions, using both hand and digital techniques and techniques, and improving their Adobe Illustrator, InDesign, and Photoshop skills.
- Students will develop an understanding of the social impact of graphic design, identifying ethical and moral issues.
- Become familiar with forms of visual communication from several cultures. Improve their capacity to listen carefully and respectfully to the cultural specificities of others.
- Students will be able to reflect upon the relationship between form-making and meaning-making.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2201 - Magnifying Small Spaces Studio (4 Credits)
We often observe, define and interact with the human body as a collection of discreet and varied selves: biological, kinesthetic, phenomenological, physiological. This studio focuses on the constellation of ontologies that form our understanding of what it means to be human, and the corresponding impact these have on how we design and who we design for. At the core of our work will be the question of whether engaging the body as a manifold of ontologies allow designers to better understand and construct the built environment.We will be working extensively with digital modes of observation and production, and hybrid forms of fabrication. You will be expected to work in both physical and digital materials and utilize muliple modes of exploration and production.
Prerequisites: DEA 1101 and DEA 1150 with minimum grades of B-, or permission of instructor.
Enrollment Information: Enrollment limited to: DEA undergraduate majors, with preference given to sophomores and juniors.
Course Fee: Course Fee, $200. Fee amount approximate.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Collect, analyze and incorporate human-centered information into design propositions using rigorous and iterative design methodologies.
- Utilize physical and digital design methods to generate, fabricate and evaluate design propositions.
- Develop an understanding of how to communicate your design propositions and processes in a clear and concise manner that is both accessible and innovative, using graphics, prototypes and text.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2510 - History of Design Futures (3 Credits)
How does the past inform the future? This course examines the history and theory of environmental design from the classical era to the 20th century, focusing on the relationship between design and innovation as a catalyst for cultural change. How have design innovations broadened the palette of human expression and experience? Key projects, methods, and ideas from across the world will be explored, encouraging a speculative approach to historical material.
Prerequisites: DEA 1101, DEA 1150/DEA 1140, and DEA 1500?.
Enrollment Information: Priority given to: DEA undergraduate majors who have completed 1000-level CORE courses, including DEA 1101, DEA 1150/DEA 1140, and DEA 1500 with minimum grades of B-. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (HA-AG), (HA-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Develop a foundational understanding of movements and periods in architecture, interior design, art, product design, furniture, landscape, and object/space design, and relate them to their cultural, technological, social, and spatial contexts.
- Explore the use of research, writing, visual analysis, and multimedia in formulating and presenting a thesis or position.
- Cultivate a speculative approach to historical material, identify potential linkages between past and current design practice.
- Explore how historical precedents can serve as points of inspiration or resistance in contemporary design practice.
- Consider the impact of shifting modes of technology and systems of communication on cultural, social, physical, and intellectual experiences of spaces and objects, and trace their trajectories.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2700 - Healthy Places: Design, Planning and Public Health (3 Credits)
Drawing from public health, environmental psychology, design, urban planning, architecture and landscape architecture, we examine how the physical environment influences health and health behaviors. We consider various contexts from rooms and buildings to parks and cities. Outcomes include physical and mental health, diet, physical activity and obesity.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE), (SBA-AG)
Exploratory Studies: (CU-CEL, CU-SBY)

Last Four Terms Offered: Spring 2025, Fall 2019, Fall 2018, Fall 2017
Learning Outcomes:

- Comprehend the influence of the built and natural environment on human health and health behaviors.
- Think critically and apply theory as well as health impact assessment methods to real world challenges.
- Apply multidisciplinary perspectives including from planning, public health, and environmental psychology.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2730 - Human Centered Design Methods (3 Credits)
This course explores the use of design methods to generate ideas and evaluate designed objects, environments, and interfaces. Lectures cultivate an understanding of the various methods, while hands-on activities provide opportunity to apply these methods to the design of a small device and its interactions with people and things.
Prerequisites: DEA 1101, DEA 1150/DEA 1140, and DEA 1500.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors who have completed 1000-level CORE courses, including DEA 1101, DEA 1150/DEA 1140, and DEA 1500 with minimum grades of B-. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Course Fee: Course Fee, $60. Course fee.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-UG)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Spring 2022
Learning Outcomes:

- To develop an understanding of how and which design methodologies can be applied in the iterative design process.
- To demonstrate the ability to develop and evaluate design prototypes responsive to the challenges and opportunities of supporting and augmenting human users.
- To communicate a design process in a research poster and video that satisfy requirements of benchmark, design-research conferences.

Schedule of Classes (https://classes.cornell.edu/)

DEA 2750 - Lighting Design: Light InForming Space (3 Credits)
Light brings both necessity and nuance to the built environment, creating functional spaces and conjuring apparitions in perception, scale, time and sensory impulses. Developing a working knowledge of lighting design while seeking light as a transformative element, students will create lighting design/documentation and build light fixtures.
Prerequisites: DEA 1110, DEA 1150 and 2000-level studio.
Enrollment Information: Enrollment preference given to: DEA undergraduate majors. Intended for: juniors and seniors in design, engineering, architecture, hospitality or non-design majors as well. Students outside DEA require permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2025, Spring 2022, Spring 2021, Spring 2020
Learning Outcomes:

- Immersion in luminance as a spatial opportunist.
- Competency in principles of light, color theory, luminaire typologies, lighting calculations, energy efficiency, and re-lamping techniques (ASHRAE Standards).
- Identify and classify luminaire and lighting types, luminance categories.
- Manipulation and integration of lighting technology and spatial dynamics.
- Model-making and hands-on experience building a light fixture.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3030 - Materials for Design and Sustainability (3 Credits)
A sustainable approach to the evaluation and selection of materials and finishes for creating products and places for people has the potential to ensure the future survival of our planet. This course provides an introduction to basic material properties and asks students to morph material sensibilities, understand performance testing, building codes, and formulate a life-cycle cost analysis. Emphasis on green methodologies and assessment, including the LEED and WELL building rating systems.
Enrollment Information: Enrollment preference given to: DEA undergraduate majors. Intended for: juniors and seniors.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Spring 2025, Spring 2024, Fall 2022, Fall 2021
Learning Outcomes:

- Understand the limits of a material and its unlimited possibilities (innovate in research, design or practice).
- Critically assess a material's life cycle, from resource extraction to end-of-life or cradle-to-cradle potential (think critically, direct own learning).
- Create and present visual/verbal research on current sustainable products as a member of a presentation team (work effectively with others, write, speak, and use communications effectively).

Schedule of Classes (https://classes.cornell.edu/)

DEA 3050 - Construction Documentation: CAD and BIM (3 Credits)
Construction documents are the written and graphic documents used to communicate a project design for construction and administration in the built world. In this course, students will gain exposure to leading industry tools, methods, and standards for producing construction drawings. Through a series of hands-on activities and assignments, students will explore components and details commonly used in design and construction, meet with practitioners in the field, and complete a basic set of drawings and documents in a BIM environment (REVIT).
Prerequisites: DEA 1150 with B- or higher, or permission of instructor.
Enrollment Information: Enrollment preference given to: DEA undergraduate majors.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Introduce formats, components, and accepted standards required for an integrated and comprehensive set of interior construction documents.
- Provide context for understanding the layers of information contained in construction documentation and their interrelationship with building components and systems.
- Develop two-dimensional drawing interpretation skills and explore how they correspond to three-dimensional elements in the built environment.
- Gain exposure to construction document requirements of the NCIDQ and ARE exams.
- Produce construction documentation for a small interior project to gain experience in modeling, detailing, and scheduling. Through a series of hands-on activities, Autodesk REVIT (BIM software) will be introduced in class.
- Introduce the conceptual basis of BIM (Building Information Modeling) and its role in contemporary practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3055 - Hospitality, Health and Design Industry Immersion Seminar (1 Credit)
Crosslisted with HADM 3055
This course provides students the opportunity to learn directly from invited industry speakers with expertise in a spectrum of industries that link health, wellness, senior living with hospitality and design. The speakers share their views on business, managerial, career, and other critical industry-related issues.
Enrollment Information: Enrollment limited to: sophomores, juniors and seniors, or by permission of instructor.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Expose students to leaders of the fast-emerging industry segments that link hospitality with health, wellness, senior living, and design.
- Learn about leading organizations within the above emerging industries.
- Illustrate the variety of career opportunities in the emerging industry and related fields.
- Provide students with first-hand understanding of industry issues, trends, opportunities, and challenges.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3301 - Design UX with Technology Studio (4 Credits)
This intermediate-level studio focuses on designing innovative commercial and/or learning/workplace environments. Various types of users experience design and evaluation approaches to design-problem solving will engage students in innovative interior design processes and outcomes. Effective use of technology for user experience simulation will be emphasized throughout the course.
Prerequisites: DEA 1101 and DEA 1150 with minimum grades of B-, or permission of instructor.
Enrollment Information: Enrollment limited to: DEA undergraduate majors.
Course Fee: Course Fee, $160. Fee amount approximate. $150 for materials; shop fee: $10.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Gather, evaluate, and apply information and research findings to innovatively solve design problems.
- Demonstrate creative and critical thinking and originality through presentation in variety of ideas, approaches, and concepts.
- Develop a good understanding of team work dynamics: collaboration, consensus building, and leadership; and work effectively with others.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3302 - The New Typologies: Design Strategy Studio (4 Credits)
The studio engages students in problem-solving, freehand drawings, digital and design skills to develop an innovative environment including libraries, retail, and learning spaces, specifically responding to cultural shifts in the built environment.
Prerequisites: two studio courses at the 2000 or 3000 level, and be experienced with REVIT, Illustrator, Photoshop and In-Design software applications.
Enrollment Information: Enrollment limited to: DEA majors.
Last Four Terms Offered: Spring 2022, Spring 2018, Spring 2017, Spring 2015
Learning Outcomes:

- Demonstrate proficiency with conceptual ideation, programming, space planning, sketching, diagramming, basic working drawings, perspectives, and FF&E.
- Verbally and visually explain design ideas using discipline-specific terminology and methods.
- Collect, analyze and report complex information and its significance in a clear and concise manner.
- Apply knowledge of design principles, constructs, codes and construction methods.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3306 - Generative Design Studio (4 Credits)
This studio aims to familiarize students with the generative approach in the design process and learn about topics including essential mathematics for computational design, shape grammar, design optimization tools, evolutionary computing, and generative design theory. Students will work in teams to design and develop a generative system that can work in conjunction with a human (a designer or non-designer) to create a product that is not achievable by a human or a computer working alone.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE), (SBA-AG)
Last Four Terms Offered: Spring 2024, Spring 2023, Spring 2022, Spring 2020
Learning Outcomes:

- This studio aims to familiarize students with the generative approach in the design process and allow them to explore opportunities for creating a novel generative design tool.
- To comprehend principles and methods in the field of generative design, and identify opportunities of generative tools for human-centered design.
- To apply effective and accurate visual representation, clear and concise verbal presentation, and an articulate written argument in communication.
- To demonstrate the ability to synthesize information and ideas through written and visual communication - and to critically apply this information to creative research and practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3308 - Positive Design Studio (4 Credits)
This course focuses on the practice of 'Positive Design' - design that aims to proactively promote or support the well-being of individuals or communities by evoking valuable experiences.
Course Fee: Materials Fee, $100. Arduino kit.
Distribution Requirements: (D-HE, KCM-HE, LAD-HE), (KCM-AG)
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Skills for integrating psychological well-being into planning, ideation, analysis, and evaluation of new design solutions.
- Scenarios and case studies that provide examples of the ways design impacts users' emotion, behavior, and well-being.
- To understand and argue the role of the design and the designer in a socially responsible manner.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3500 - The Ambient Environment (3 Credits)
Introduces human-factor considerations in lighting, acoustics, noise control, indoor air quality and ventilation, and the thermal environment. Views the ambient environment as a support system that should promote human efficiency, productivity, health, and safety. Emphasizes the implications for planning, design, and management of settings and facilities.
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Explore key concepts in each of the major topic areas covered i.e. indoor climate (thermal conditions, ventilation and air quality), indoor lighting, and indoor acoustics.
- Understand environmental measurement techniques and be familiar with methods.
- Understand how recent transformations in technology have influenced the design of the ambient environment, including the Ambient Intelligence (Aml) paradigm and its opportunities for designing intelligent environments.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3510 - Human Factors and Inclusive Design (3 Credits)
The course explores how human factors and user inclusivity can be systematically considered and implemented in the development of products (e.g., the capabilities and constraints of the physical, cognitive and cultural makeup of human beings). The course includes practical exercises and field project work.
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- An ability to articulate key concepts of human factors and inclusive design including human information processing, cognitive and physical human-product relationships, and design exclusivity assessment.
- Evidence-based reasoning and make critical judgments about both inclusivity and human factors issues.
- Theoretical knowledge and practical skills to initiate, design, and report an empirically-based project that addresses issues of human factors and inclusive design.
- Critical skills to improve the ergonomic aspects of a product and knowledge of aging- and disability-related design challenges.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3530 - Planning and Managing the Workplace: Evidence-Based Design and Organizational Ecology (3 Credits)
Examine how the physical design and management of workplaces impacts both the health and performance of knowledge workers and also an organization's overall business outcomes. Learn about the latest trends in various workplace settings. Analyze the components of work and provide relevant and applicable design solutions. Learn the fundamentals of ethnographic methods for collecting user information to inform decision making about planning and managing workplaces to maximize health, efficiency, safety, productivity, and profitability.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Fall 2024, Fall 2022, Fall 2018, Fall 2017
Learning Outcomes:

- Communicate orally and through written reports with FPM representatives and clients and strengthen professional and ethical skills.
- Interpret and apply evidence to improve performance, quality, and efficiency for knowledge workers and organizations.
- Direct one's own learning to seek the critical knowledge needed to solve problems using ethnographic methods.

Schedule of Classes (https://classes.cornell.edu/)

DEA 3550 - Research Methods in Human-Environment Relations (3 Credits)
This course provides a foundation in research design, methods and tools, particularly those commonly used in human-environment relations (HER) research. Student will learn of the main aims and approaches to conducting HER research, as well as its terminology, logic, and procedures. Research examples, class exercises and project case studies will help to illustrate and reinforce course objectives. By the end of the course you will have an understanding of how to design, conduct, report, and critically evaluate research studies. Skills gained in this course will also enable you to be a savvy consumer of research.
Enrollment Information: Enrollment limited to: undergraduate students who have completed at least one full year of undergraduate instruction at Cornell (minimum of 5 1000-level courses) prior to enrolment. Enrolment preference will be given to: DEA Majors and Minors. DEA Majors students must have completed five (5) 1000-level DEA courses prior to enrolment
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Evaluate and critique both research journal articles and reports of research in the media.
- Understand the principles, methods, and logic of research design and methods.
- Develop research strategies to address questions of interest in the field.
- Understand and commit to ethical principles related to the conduct of research.
- Communicate research clearly, logically, and persuasively.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4000 - Directed Readings (1-15 Credits)
For study that predominantly involves library research and independent reading.
Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 4010 - Empirical Research (1-15 Credits)
For study that predominantly involves data collection and analysis or laboratory or studio projects.
Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 4020 - Supervised Fieldwork (1-15 Credits)
For study that involves both responsible participation in a community setting and reflection on that experience through discussion, reading, and writing. Academic credit is awarded for this integration of theory and practice.
Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Summer 2024, Spring 2024
Schedule of Classes (https://classes.cornell.edu/)

DEA 4025 - Design for Change: Imagining Decolonial Futures (3 Credits)
Crosslisted with FSAD 4025
This course explores the role of design in reshaping the world towards social justice and sustainability. Designing for change requires creating different cultural patterns and worldviews - examining taken-for-granted assumptions, narratives, and myths of the hegemonic cultural model (known as Modernity) that limit our capacity to imagine the world differently. As the world is enmeshed in colossal interconnected crises, it seems that imagination has been funneled to two avenues: techno-solutions to the symptoms of the crises and dystopic futures. This course explores two main ideas: a) alternatives are possible, b) the area of design for change would benefit from exchanges with different cultures and knowledge systems. Designing decolonial futures is about weaving together knowledge from multiple cultures, thus recognizing and creating alternatives based on different ways of understanding the world.
Distribution Requirements: (CA-AG, D-AG, HA-AG), (CA-HE, D-HE, HA-HE, LAD-HE)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022
Learning Outcomes:

- Students will be able to understand what is at stake in the international movement to "decolonize design" and the importance of detaching design from the assumptions, promises, and values of Modernity/Coloniality to generate significant change. Students will be introduced to the main theories and approaches used in decolonial design: decoloniality, pluriversality, epistemologies of the South, transition discourses/design, speculative design, and design for social innovation.
- Students will be able to recognize structural features of the Eurocentric Modernity at the root of social inequities and unsustainability (which connect social and environmental crises). Without examining these structures, designers keep trying to solve the symptoms instead of addressing the causes. Particularly, students will reflect upon the legacy of colonialism on society and the natural environment.
- Students will be able to recognize that narratives frame the way we design. Creating different futures requires new narratives and visions to reframe the design practice and the meaning of technological innovations. Students will be asked to create new narratives to reframe their design practice/research.
- Students will be able to recognize taken-for-granted assumptions and myths of Modernity that hinder the understanding of other cultures, epistemologies, and ontologies—i.e., even when designers want to listen to the Other, the understanding is very limited. Therefore this course aims to enhance the student's capacity to listen to and collaborate with people from other cultures— recognizing and respecting differences in worldviews, cultural patterns, ways of knowing—to generate change.
- Students will be asked to create compelling visual communications, knowledge visualizations, and narratives to communicate the topics discussed in class and their visions of alternative futures to other people. The creative outputs will be assembled into an exhibit that will take place in one of CHE galleries and on a website.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4030 - Teaching Apprenticeship (1-15 Credits)
For study that includes teaching methods in the field and assisting faculty with instruction. Students must have demonstrated a high level of performance in the subject to be taught and in the overall academic program.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 4040 - Professional Practices and Ethics (2 Credits)
Professional Practice/Ethics is designed to prepare graduating seniors with the working knowledge and essential skills needed to pursue professional jobs and other opportunities in the competitive field of design. This course is an introduction to the Professional Practice of the design disciplines; and concepts, conventions and processes related to the design and construction industry. Emphasis is placed on professionalism, professional ethics, leadership skills, regulation of the profession, business management, contracts and negotiations, specifications, building planning controls, and other aspects of professional practice.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors who have completed their 3000-level CORE courses. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Develop an awareness of the context of the design professions.
- Investigate the ethical and professional responsibilities of Architecture and Interior Design practice.
- Explore aspects of programming, other pre-design services, and cost estimating.
- Understanding of fundamentals of professional practice: ethics, liability, sustainability, profitability.
- Ability to identify/create opportunity for professional practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4050 - Design Portfolio and Communication (3 Credits)
This course is designed for students who want to learn the basic principles of visual communication and how to apply them in concert with design methodologies in order to solve communication and design problems. Visual communication can clarify, distill and translate complex designs, data and ideas. The class introduces principles of graphic design and visual communications using a range of representation techniques. It explores ways to communicate ideas digitally through text, image and video. The focus will be on the applications in Adobe Creative Cloud, including Illustrator, InDesign, Photoshop and AfterEffects.In addition, the course will assist and mentor students in assembling a comprehensive portfolio of their academic work. Students will learn graphic techniques, as well as how to organize and layout their projects in both book and digital formats. The purpose of the portfolio is to showcase each student's best technical, creative, and analytical skills. The end product will be a customized template that can then be supplemented with new projects as students continue to develop professionally.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors who have completed their 3000-level CORE courses. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Read, understand and communicate in the language of graphic design.
- Use design technology such as Photoshop, Illustrator, and InDesign.
- To develop systems of creative thinking that will aid in solving visual problems.
- Create a portfolio with excellent craftsmanship and clear communication.
- Ability to identify/create opportunity for professional practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4220 - Ecological Literacy and Design (3 Credits)
Crosslisted with ARCH 4601
This course is a design-oriented lecture/seminar course for students who are concerned about the role they play as design professionals in affecting the biophysical world. The course's prime objective is to develop a new worldview founded on a broader sensitivity for things living and an accompanying set of meaningful environmental ethics. The course's secondary objectives are to develop a deeper knowledge of environmental issues, construct conceptual frameworks for analysis of these issues and to demonstrate how ecological knowledge can be applied to design.
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Spring 2023, Spring 2022, Spring 2021
Learning Outcomes:

- Develop grounding in the field of ecology as it pertains to the human/nature relationship and the manifest expressions of these ideas through the design of the built environment.
- Demonstrate a greater proficiency in critical thinking through rhetorical analysis and criticism of the readings.
- Display commitment to ethical principles, especially those pertaining to the environment.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4230 - Restaurant Charrette: Design Without Reservations (1 Credit)
This intensive weekend-long course pushes the boundaries of current design practices by developing a concept plan for an innovative environment in a nontraditional setting. Students work in multi-disciplinary teams to develop solutions and prepare design presentations for review by visiting design professionals. Typologies include: restaurants, pop-up venues, and user experience phenomena.
Prerequisites: minimum of three design studios or permission of instructor.
Enrollment Information: Enrollment preference given to: DEA seniors but hospitality, architecture, engineering, and non-DEA students are encouraged to enroll. Preference given to seniors.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2024, Spring 2022, Spring 2019, Spring 2017
Learning Outcomes:

- Explore innovation and creativity in temporal spatial experience (innovate in research, design or practice).
- Apply key issues related to progressive environments (comprehend disciplines and fields).
- Focus on effective team-work within the confines of one weekend (work effectively with others).

Schedule of Classes (https://classes.cornell.edu/)

DEA 4375 - Business Design (3 Credits)
Crosslisted with AEM 4375
This engaged learning course applies design strategies to real-world problems in a business context; in other words, we take a human-centered approach to innovation. Students act as business design consultants working directly with a social enterprise client on a sustainability-related challenge throughout the semester. Working in multidisciplinary teams, students apply a design toolkit and mindset for creative problem solving to a project that results in a portfolio-ready deliverable. This collaboration allows students to immerse themselves in a professional setting in which they explore business opportunities; develop innovative concepts; and propose and prototype entrepreneurial solutions, particularly around the theme of circular economy. Past clients include the City of Ithaca Economic Development and Finger Lakes ReUse. Satisfies the Dyson Grand Challenges project requirement.
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Fall 2023, Fall 2022, Fall 2021, Spring 2020
Learning Outcomes:

- Students will be able to apply qualitative and ethnographic design research techniques in a client-based project.
- Students will be able to hone visualization and storytelling methods to synthesize and communicate data and concepts.
- Students will be able to use the iterative process for problem solving: generating, testing, and refining ideas, products, business models, etc.
- Students will be able to practice working collaboratively in multidisciplinary teams.
- Students will be able to model innovative concepts at the intersection of design and business.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4401 - Adaptive Reuse Studio: Recycling the Built Environment (4 Credits)
Economic and social forces have created the need for the adaptive reuse of existing structures vs new construction throughout the built environment. Utilizing sustainable principles and the LEED rating system, this comprehensive studio challenges students to complete all phases of a historic preservation project using an historic structure in the Northeast. Site visits for building assessments, professional practice tutorials, and seminars on preservation enable students to develop a holistic understanding of how a building thinks and learns over time.
Prerequisites: students must have completed two DEA studio courses, one at 2000 level and one at 3000 level, and DEA 3050 or receive permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-CEL, CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Research, document and re-design an existing historic structure for rehabilitation by completing all phases of an adaptive reuse project (innovate in research, design or practice, write, speak, and use visual communications effectively).
- Integrate professional practice procedures to facilitate the transition from educational to professional expectations (display commitment to ethical principles, apply multi-disciplinary perspectives).
- Initiate preparation for the NCIDQ licensing examination (think critically).

Schedule of Classes (https://classes.cornell.edu/)

DEA 4402 - Disruptive Design: Competitions Studio (4 Credits)
This course is a unique studio bringing together students on interdisciplinary teams to work on competitions, speculative projects and real client challenges requiring both a design and business case within the framework of the UN Sustainable Development Goals (SDGs). You will develop projects and processes from the intersection of your respective disciplines, enabling all participants to generate creative, innovative and feasible ideas, as well as communicate your vision effectively persuasively. This course is ideal for those interested in design, social innovation, strategy and entrepreneurship. It offers an opportunity to work in the intense studio environment, characterized by the iterative, human-centered design process, fast failure and peer learning. Each student will submit at least 3 design projects of various scale, requirements and origin, resulting in portfolio-ready projects that past students have gone on to develop and grow after graduation.
Prerequisites: for design majors: completion of two upper level studios, or permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2022, Spring 2021, Spring 2019, Spring 2018
Learning Outcomes:

- Apply research and analysis tools to the design process and learn to identify design and business opportunities.
- Develop methods to quickly and effectively deliver design and business ideas in visual and written form.
- Use the iterative process for problem solving: generating, testing, and refining ideas, products, business models, etc.
- Practice working collaboratively in interdisciplinary teams.
- Model innovative concepts at the intersection of design and business.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4403 - Technopoetics-Designing Tomorrow (4 Credits)
Today's advancements in technologies such as artificial intelligence, biotechnology, and robotics are rapidly transforming human experiences. In response, this course, drawing on Speculative Design and Design Futures, engages students in hands-on design inquiries to critically examine emerging technologies (especially AI) and their implications. Borrowing from the arts, critical design, and science fiction, the course challenges students to prototype alternative technological futures and interrogate how these innovations redefine design paradigms, the ethical boundaries of technology, and the evolving responsibilities of designers in the future. *This year, the course will focus on AI. Students will be tasked with creating a design prototype that integrates AI in a meaningful and thought-provoking way.
Prerequisites: DEA students: DEA 1101, DEA 1140, DEA 1150, DEA 2730, DEA 2000-level studio, DEA 3000-level studio. Non-DEA students: INFO 3450/DEA 2730 or equivalent.
Enrollment Information: Enrollment preference given to: DEA seniors.
Learning Outcomes:

- Develop knowledge in the approaches of Speculative Design, Design Futures, and other alternative designs, and understand how design's frictional role can impact its productional role.
- Integrate Speculative Design and Design Futures to create physical computing artifacts that interrogate socio-technical challenges.
- Critically examine emerging technologies and their cultural, societal, and ethical implications through discussion, case studies, and design critiques.
- Develop high-quality, experience-driven prototypes that demonstrate technical fluency in emerging technologies and integrate them seamlessly into the designs.
- Communicate their experimental designs effectively, using scholarly formats.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4500 - Policy Meets Design: High-Impact Facilities of the 21st Century (3 Credits)
Active participation from local and global leads, industry, and healthcare providers, students examine how well-designed environments and policies empower people, organizations, and communities to achieve their health-related operational and business objectives. Students apply the lessons from high-impact environments to their specific area of interest (e.g. senior living, healthcare, hospitality, education, housing, landscape, and urban planning).
Enrollment Information: Enrollment preference given to: seniors and graduate students; juniors and sophomores are welcome to attend if there is room.
Exploratory Studies: (CU-CEL, CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Assess environments strategies and policies, identify operational and environmental gaps, and propose design solution.
- Explore how concepts of environmental psychology, behavioral economics, sustainability, and LEAN can be used to optimize facility and environmental design.
- Take part in conversations with community, national and global leaders and participate in debates to evaluate various impacts of decisions on people.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4590 - Problem-Seeking through Programming (3 Credits)
An architectural program is used to define the design problem, guide the design process and evaluate design solutions. Students will develop skills in preparing a program while keeping in mind the potential audiences. This course emphasizes the role of social science research and environment - behavior interaction in facility planning and in the design process.
Enrollment Information: Enrollment priority given to: DEA undergraduate majors who have completed their 3000-level CORE courses. DEA minors and transfers will be given enrollment consideration based on course caps and/or permission of instructor.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE), (SBA-AG)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Students will be able to identify different design programming methods and understanding key issues to consider in selecting and implementing a particular programming approach through lectures, readings, and hands-on exercise (grounding in disciplines and fields).
- Students will utilize social science research, facility management skills, and design concepts to develop a program of space requirements (multidisciplinary perspectives).
- Students will be able to develop critical success factors in developing and managing an effective programming process by participating in a major programming project for a real client (critical thinking).

Schedule of Classes (https://classes.cornell.edu/)

DEA 4700 - Applied Ergonomic Methods (3 Credits)
Covers physical and cognitive ergonomic methods and techniques and their application to the design of products and modern work environments. Covers conceptual frameworks for ergonomics analysis, systems methods and processes, a repertoire of ergonomics methods, and techniques for the analysis of products, work activities and work systems.
Prerequisites: DEA 3510.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Explore a wide variety of conceptual and methodological issues in cognitive and physical ergonomics, contextual models of ergonomics and their impact on the choice of analytical methods.
- Conduct an ergonomic analysis for both physical and cognitive ergonomics topics.
- Develop and frame ergonomic recommendations for workplace ergonomic problems.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4800 - Ethical Design: Engine of Positive Change (3 Credits)
Crosslisted with FSAD 4800
Design has the power to change how we view and interact with the world which can cause positive or negative impacts. Modern society faces various issues which are all closely related to the ethical aspects of design: humanitarian crises, labor exploitation, injustice in the workplace, loss of diversity, overconsumption, pollution, lack of transparency and pseudo-solutions to name a few. This course will discuss various ethical issues in design that impact individuals, community/society, economies, cultures, social dynamics, and the environment.
Distribution Requirements: (CA-AG, D-AG, LA-AG, SBA-AG), (CA-HE, D-HE, SBA-HE)
Last Four Terms Offered: Spring 2025, Spring 2024
Learning Outcomes:

- Think critically about the main fields of design practice, identifying the ethical challenges of each in terms of current environmental, social, and health crises.
- Investigate the impact of unethical design, production, and marketing practices on individuals, social groups, and the environment.
- Identify the difference between pseudo-solutions that mitigate the symptoms of harmful practices and those initiatives and approaches that address the harm caused by the current production and consumption systems.
- Examine how to enhance, improve, and amplify social innovation initiatives that address the harm caused by unethical design, production, and marketing practices.

Schedule of Classes (https://classes.cornell.edu/)

DEA 4990 - Senior Honors Thesis (1-15 Credits)
Opportunity for DEA majors to undertake original research and scholarly work leading to the preparation of a thesis. Students work closely with their thesis advisor on a topic of interest. For information, students should visit https://www.human.cornell.edu/dea/academics/undergraduate/honors.
Exploratory Studies: (CU-UG)

Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 5210 - Interaction Design Studio (4 Credits)
Everyday things made interactive and adaptive by way of embedded systems have great promise to support and augment us at work, school, and home, as we roam, play, interconnect, and age. Students will iteratively design, prototype and evaluate artful, meticulous, full-scale, cyber-physical things responsive to specific challenges of an increasingly digital society.
Prerequisites: Design and Environmental Analysis (DEA) majors must have completed two DEA studio courses at the 2000 and 3000 level.
Enrollment Information: Enrollment preference given to: Design and Environmental Analysis (DEA), Fiber Science and Apparel Design (FSAD), Information Science and Mechanical Engineering, and students enrolled in the Ph.D. and minor programs in Robotics.
Course Fee: Materials Fee, $60. Arduino kit.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2020
Learning Outcomes:

- To grapple with under-constrained, “wicked” problems and opportunities of living on this planet.
- To demonstrate an ability to design, prototype, and evaluate full-scale, interactive and adaptive things responsive to these problems and opportunities, and present them in a video.
- To demonstrate, in a written report, an ability to communicate the motivations for, iterative development of, and expected use of the interactive prototypes, as well as assess their shortcomings.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5304 - Design Accountability: Evaluation of the Physical Environment (3 Credits)
Designers must be accountable for the impact of the environment on the people who experience it. Well-constructed evaluations are a means to objectively assess whether we have achieved the intended design goals. This course illustrates the theoretical roots of evaluation and provides guidance on conducting building and landscape evaluation research.
Enrollment Information: Enrollment limited to: undergraduate seniors who have taken a statistics course and all graduate students.
Last Four Terms Offered: Fall 2024, Fall 2023, Spring 2022, Fall 2020
Learning Outcomes:

- This course will teach students how to evaluate design work. The subjects of these evaluations can range from objects to buildings to urban design. Upon completing the course, students will be able to:
- Describe current, comprehensive definitions and interpretation of evaluation research.
- Place the historical and theoretical roots of evaluation in the context of the needs of contemporary society.
- Establish techniques for establishing the business case and integrating research into practice.
- Assess the effectiveness of the multiple methods of gathering evaluation data.
- Conduct evaluation research projects involving all scales of the physical environment including furniture, architecture, landscape architecture and urban design.
- Reflect on the impact of service-learning.
- Critique and evaluate information, design, and claims; interpret visual information; demonstrate quantitative reasoning and statistical analysis.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5305 - Health and Healing Studio (4 Credits)
The built and natural environment can provide efficient and effective mechanisms that restore the body and mind's ability to heal. In this studio, students will utilize spatial constructs that apply principles of environmental psychology; address code-compliance, critical adjacencies, and workflow circulation; and support evidence-based design principles.
Prerequisites: DEA 1101 and DEA 1150 with minimum grades of B-, or permission of instructor.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2024, Spring 2023, Fall 2021, Fall 2019
Learning Outcomes:

- Use hand drawings, models, and computer renderings as means of idea exploration.
- Practice and demonstrate professional verbal and visual communication skills.
- Develop or evaluate heath-facility related design programs.
- Learn how to execute each phase of the design process from programming to design.
- Conduct literature reviews on design research.
- Engage with clients to obtain design information.
- See design as a tool for addressing diversity.
- Enhance awareness of the needs of individuals of different socio-economic backgrounds.
- Design for flexibility in an evolving work/care environment; reflect on the impact of service-learning and community engagement.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5500 - Designing for Material Affect (3 Credits)
This course explores material affects' ephemeral yet profound influence on human experiences. By integrating theories from environmental psychology, philosophy, and design, students investigate how materials shape both our surroundings and ourselves. Emphasizing an applied theory approach, students will actively engage with concepts by crafting and testing material assemblies. Through hands-on exploration, they'll uncover the fundamental connections between material qualities, sensory interactions, and environmental atmospheres, fostering design innovation.
Enrollment Information: Enrollment preference given to: upper level undergraduate students in FSAD, DEA, AAP, MUSIC, ARCH, and LARC majors, and graduate students with design backgrounds.
Last Four Terms Offered: Spring 2024, Spring 2022
Learning Outcomes:

- Investigate typologies of physical and affective material qualities.
- Explore theories of affect, atmosphere, aesthetics, phenomenology, and related topics.
- Examine the connection between material qualities and human affect via sensory experiences and physical phenomena through hands-on exploration.
- Apply research, design, fabrication, and evaluation techniques to construct human-experience-focused material propositions.
- Employ graphic information visualization and narrative communication for accessible presentations.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5520 - Virtual Experience of Designed Environments (3 Credits)
This course will immerse students in advanced techniques of design communication and evaluation for simulation-based research on user experience in designed environments. Through lectures, readings, demos, and hands on exercises, the course explores advanced visualization media for design and design research.
Prerequisites: working knowledge and experience in 3D modeling and rendering.
Enrollment Information: Primarily for: juniors interested in honors theses, seniors and graduate students.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2025, Spring 2023, Spring 2021, Spring 2020
Learning Outcomes:

- Students will demonstrate a coherent understanding of design and design research with advanced computer mediated 3D visualization technologies in the field of architecture, interior design, and user experience/interface design.
- Students will apply analytic knowledge from readings and discussions to critically review and evaluate existing theories in interdisciplinary areas of environment and behavior, environmental psychology, design communication and human-computer interaction.
- Students will brainstorm viable and innovative research topics and learn how to start and finish an experimental study from readings, lectures, demos, and discussions.
- Students will propose mini studies of their own based on selected experimental research frameworks and conduct preliminary user experience experiments (with as few as five subjects).
- Students will learn and demonstrate advanced 3D visualization skills required for experimental stimuli development.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5540 - Workplace Strategy Studio (4 Credits)
This course provides students with a unique hands-on experience of working with real clients to simulate workplace strategic consulting practice. Students will learn and apply concepts, techniques (both strategic and tactical), and tools to plan, design, evaluate, and reinvent workplaces to support the achievement of ambitious business goals, inspire today's connected and mobile knowledge workers, facilitate the management of uncertainty and change in large complex organizations, and envision future work modes and its implications for the creation of future workplace. Professional communication in multiple forms and settings for effective client interaction and project development is emphasized.
Prerequisites: DEA 4590 or permission of instructor.
Course Fee: Course Fee, $200. Fee amount approximate.
Distribution Requirements: (D-HE, LAD-HE)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2024, Spring 2023, Spring 2022, Spring 2021
Learning Outcomes:

- Apply concepts, techniques, and tools of workplace strategies planning and management to address typical challenges facing large complex organizations.
- Develop innovative and well-grounded workplace planning, design, reengineering, and management solutions for value generation, change management, and branding.
- Understand major drivers and trends of workplace development, and develop the knowledge, experience, as well as confidence as a strategic consultant to envision future work mode and work settings.
- Work in small teams and compete with other teams in the class as in a consulting project in real world; polish skills for client communication and professional delivery of consulting work in oral, visual, and written forms. Depending on specific project for the semester, students may experience cross-culture collaboration.

Schedule of Classes (https://classes.cornell.edu/)

DEA 5700 - Designing Age Friendly Environments (3 Credits)
This course focuses on the role of the built environment in fostering healthy development and aging across the lifespan, as well as examining how designed environments can support or limit healthy development and aging. Specifically, it will examine the relationship between children and older adults and their everyday environments at three scales: the city/community, individual spaces/interiors, and at the product/technology level. Through presentations, readings, fieldwork, site visits, design case studies, and community-engaged projects, students will critically explore age-friendly frameworks, and research and design strategies to gain an appreciation of the potential impacts, as well as opportunities and challenges, of designing age-friendly environments. Students will also be introduced to effective strategies and tools for assessing the age-friendliness of communities, spaces, and products, and translating findings from research and best practices into successful, supportive designed environments for children and older adults.
Enrollment Information: Open to: graduate and senior undergraduates of any program. Graduate students to have completed at least one course in Research Methods. Undergraduate students to have completed at least two years of undergraduate instruction, and at least one course in Research Methods. Enrollment preference given to: HCD majors or graduate students. Recommended prerequisite: (graduate) DEA 6200. Recommended prerequisite or corequisite: (undergraduate) one or more of the following: DEA 1500, DEA 2700, DEA 2730, DEA 3510, DEA 3550, DEA 3770, DEA 4500.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE)
Exploratory Studies: (CU-CEL, CU-UG)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- To understand the role and benefits of creating environments which are inclusive of and address the needs of young people and older adults.
- To explore and critique age-friendly frameworks and design strategies, with the aim of developing effective approaches and practices for designing environments for children and seniors.
- To gain experience carrying out critical environmental assessments, and considering implications for children and seniors, and more broadly for design and planning fields.
- To benefit from and contribute to community-engaged projects to support age-friendly environmental design.
- To further develop critical thinking and reflection skills, as well as group facilitation and presentation skills, through participation in class discussions and helping to curate course content.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6000 - Special Problems for Graduates (1-15 Credits)
For study of special problems in the areas of interior design, human environment relations, or facilities planning and management.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 6010 - Directed Readings (1-15 Credits)
For study that predominantly involves library research and independent study.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 6020 - Graduate Empirical Research (1-15 Credits)
For study that predominantly involves collection and analysis of research data.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 6025 - Design for Change: Imagining Decolonial Futures (3 Credits)
Crosslisted with FSAD 6025
This course explores the role of design in reshaping the world towards social justice and sustainability. Designing for change requires creating different cultural patterns and worldviews - examining taken-for-granted assumptions, narratives, and myths of the hegemonic cultural model (known as Modernity) that limit our capacity to imagine the world differently. As the world is enmeshed in colossal interconnected crises, it seems that imagination has been funneled to two avenues: techno-solutions to the symptoms of the crises and dystopic futures. This course explores two main ideas: a) alternatives are possible, b) the area of design for change would benefit from exchanges with different cultures and knowledge systems. Designing decolonial futures is about weaving together knowledge from multiple cultures, thus recognizing and creating alternatives based on different ways of understanding the world.
Distribution Requirements: (CA-HE, D-HE, HA-HE, LAD-HE)
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022
Learning Outcomes:
- Students will be able to understand what is at stake in the international movement to "decolonize design" and the importance of detaching design from the assumptions, promises, and values of Modernity/Coloniality to generate significant change. Students will be introduced to the main theories and approaches used in decolonial design: decoloniality, pluriversality, epistemologies of the South, transition discourses/design, speculative design, and design for social innovation.
- Students will be able to recognize structural features of the Eurocentric Modernity at the root of social inequities and unsustainability (which connect social and environmental crises). Without examining these structures, designers keep trying to solve the symptoms instead of addressing the causes. Particularly, students will reflect upon the legacy of colonialism on society and the natural environment.
- Students will be able to recognize that narratives frame the way we design. Creating different futures requires new narratives and visions to reframe the design practice and the meaning of technological innovations. Students will be asked to create new narratives to reframe their design practice/research.
- Students will be able to recognize taken-for-granted assumptions and myths of Modernity that hinder the understanding of other cultures, epistemologies, and ontologies—i.e., even when designers want to listen to the Other, the understanding is very limited. Therefore this course aims to enhance the student's capacity to listen to and collaborate with people from other cultures— recognizing and respecting differences in worldviews, cultural patterns, ways of knowing—to generate change.
- Students will be asked to create compelling visual communications, knowledge visualizations, and narratives to communicate the topics discussed in class and their visions of alternative futures to other people. The creative outputs will be assembled into an exhibit that will take place in one of CHE galleries and on a website.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6030 - Graduate Practicum (1-15 Credits)
For study that predominantly involves field experience in community settings.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 6055 - Hospitality, Health and Design Industry Immersion Seminar (1 Credit)
Crosslisted with HADM 6055
This course provides students the opportunity to learn directly from invited industry speakers with expertise in a spectrum of industries that link health, wellness, senior living with hospitality and design. The speakers share their views on business, managerial, career, and other critical industry-related issues.
Enrollment Information: Enrollment limited to: graduate students.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:
- Expose students to leaders of the fast-emerging industry segments that link hospitality with health, wellness, senior living, and design.
- Learn about leading organizations within the above emerging industries.
- Illustrate the variety of career opportunities in the emerging industry and related fields.
- Provide students with first-hand understanding of industry issues, trends, opportunities, and challenges.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6100 - Studies in Design Thinking (3 Credits)
This graduate course explores design-thinking strategies at the intersections of creativity, science, and engineering. Students will learn about the creative strategies that today's designers use to address complex problems, and they will apply intuition, imagination, and reasoning to produce innovative design solutions. Different theoretical themes and design thinking techniques will be introduced and explored each week through critical readings, discussions, and creative synthesis.
Distribution Requirements: (D-HE, LAD-HE)
Last Four Terms Offered: Spring 2024, Spring 2023, Spring 2022, Spring 2021
Learning Outcomes:
- Understand and apply design thinking principles as a means of solving problems.
- Apply human-centered and user-driven approaches as core values in the design process.
- Use abductive reasoning as an alternative approach to deductive and inductive reasoning.
- Make experimental ideas tangible through sketches, mockups, and prototypes.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6200 - Studies in Human-Environment Relations (3 Credits)
This course is a seminar course intended for graduate students in Design and Environmental Analysis and graduate students in related fields. The course introduces students to the history, theories, and major research trends in the field of human-environment relations. Human environment relations refer to the interaction between the built environment and human behavior. The course draws upon literature from multiple disciplines, including environmental psychology, human factors/ergonomics, sociology, human development, facility planning, geography, and urban planning.
Enrollment Information: Enrollment limited to: graduate students. Enrollment preference given to: DEA majors. Outside majors require permission of instructor.
Distribution Requirements: (SBA-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Grounding in disciplines and fields: Students will understand the historical foundations of the field of human-environment relations; students will apply major theories, conceptual frameworks, and research in the field of human-environment relations.
- Multidisciplinary perspectives: Through readings and discussions, students will learn and understand the various academic areas of study that contribute to the field of human-environment relations.
- Critical Thinking: Students will critically analyze and evaluate the research evidence from key areas of human-environment relations. Students will be prepared for future course work and research in this field.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6210 - Architectural Robotics (3 Credits)
Embedding robotics into the fabric of the built environment fosters a more interactive and potentially more intimate relationship between the spaces we live in and us, and represents a new frontier for design, computing, and psychology. Part-seminar, part-lab, this course considers the design, technical, social, ecological, and ethical challenges and opportunities of architectural robotics.
Enrollment Information: Enrollment priority given to: DEA, FSAD and MAE majors.
Course Fee: Course Fee, $60. Course fee.
Distribution Requirements: (D-HE, HA-HE, KCM-HE, LAD-HE, SBA-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2020
Learning Outcomes:

- To demonstrate, in a written report, an ability to communicate the motivations for, iterative development of, and expected use of the Architectural Robotic room and/or component of the room that was prototyped, as well as assess its shortcomings.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6250 - Human Dimensions of Sustainable Building (3 Credits)
This course discusses critical barriers for delivering sustainable and net-zero buildings, and brings attention to multiple points of intervention that relate to the role of human being in building practice, for significant improvement in quality of built environments, building energy performance, and the overall environmental impact of the building sector. Strategies at different stages of building lifecycle, including planning, design, finance, construction, operation, and retrofit processes that affect climate change mitigation and resilience building will be explored.
Course Fee: Course Fee, $50. Fee amount approximate.
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Spring 2023, Fall 2014, Fall 2012, Fall 2011
Learning Outcomes:

- Analyze occupant impact on building performance, key drivers and players in delivering sustainable buildings, and the different magnitude of their influence on outcomes delivered; be able to identify specific barriers in the fragmented value chain for sustainable and net-zero building practice.
- Recognize the interwoven nature of the stakeholder network in a building project, different stakeholders' potential to support the delivery of sustainable practice, and be able to evaluate the pros and cons of solution scenarios.
- Search for leveraging points and effective interventions to change the status quo in the building sector; develop effective approaches to collect and analyze data to inform solutions, express opinions and engage audience (specific stakeholders).

Schedule of Classes (https://classes.cornell.edu/)

DEA 6400 - AI, Embodiment, and Design (3 Credits)
This graduate-level course examines artificial intelligence (AI) as a critical design medium for rethinking human-computer interaction. Moving beyond conventional HCI paradigms, students will explore how AI and physical interfaces can be merged to align with the complexities of human cognition, behavior, and emotion. We particularly focus on physical designs with AI—considering somatic, sensory, and emotional dimensions that are inherent to us. The resulting designs will explore factors beyond accuracy and performance, incorporating users' experience, individuality, and sense of self as central design considerations. The course challenges the prevailing assumption of humans as information processors. Grounded in HCI theories and human-centered design methodologies, students will engage in seminars, research workshops, and hands-on prototyping to envision future interfaces that are more thoughtful, responsible, and intrinsically aligned with us.
Prerequisites: DEA students: DEA 6100, DEA 2730/INFO 3450 or equivalent. non-DEA students: INFO 4400, INFO 3450/DEA 2730 or equivalent.
Enrollment Information: Priority given to: DEA grad students. Recommended Prerequisites: DEA 5210.
Course Fee: Supply Fee, $80. Course fee will cover electronics kit and AI access.
Learning Outcomes:

- Develop knowledge in AI and other computing methods that can be applied in design studios, thesis research, and professional practice.
- Understand the embodied cognitive dimensions of interaction design and identify new opportunities for designs that engage how we feel, think, and act.
- Apply phenomenological and soma design methods to articulate affective, sensory, and behavioral aspects of human experience in artifact-based research.
- Produce a physical design outcome that concerns AI and humans, addressing critical user or human challenges.
- Develop scholarly competencies in academic reading and writing, towards effective scholarly presentations and article writing.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6406 - Generative Design Studio (4 Credits)
This studio aims to familiarize students with the generative approach in the design process and learn about topics including essential mathematics for computational design, shape grammar, design optimization tools, evolutionary computing, and generative design theory. Students will work in teams to design and develop a generative system that can work in conjunction with a human (a designer or non-designer) to create a product that is not achievable by a human or a computer working alone.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE)
Last Four Terms Offered: Spring 2024, Spring 2023, Spring 2022, Spring 2020
Learning Outcomes:

- This studio aims to familiarize students with the generative approach in the design process and allow them to explore opportunities for creating a novel generative design tool.
- To comprehend principles and methods in the field of generative design, and identify opportunities of generative tools for human-centered design.
- To apply effective and accurate visual representation, clear and concise verbal presentation, and an articulate written argument in communication.
- To demonstrate the ability to synthesize information and ideas through written and visual communication - and to critically apply this information to creative research and practice.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6500 - Problem-Seeking through Programming (3 Credits)
Each student is required to attend DEA 4590 lectures, complete all required readings and assignments, and meet with the instructor and with other graduate students. An additional programming project is required for all graduate students.An architectural program is used to define the design problem, guide the design process and evaluate design solutions. Students will develop skills in preparing a program while keeping in mind the potential audiences. This course emphasizes the role of social science research and environment - behavior interaction in facility planning and in the design process.
Distribution Requirements: (D-HE, LAD-HE, SBA-HE)
Exploratory Studies: (CU-CEL)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Students will be able to identify different design programming methods and understanding key issues to consider in selecting and implementing a particular programming approach through lectures, readings, and hands-on exercise (grounding in disciplines and fields).
- Students will utilize social science research, facility management skills, and design concepts to develop a program of space requirements (multidisciplinary perspectives).
- Students will be able to develop critical success factors in developing and managing an effective programming process by participating in a major programming project for a real client (critical thinking).

Schedule of Classes (https://classes.cornell.edu/)

DEA 6510 - Human Factors and Inclusive Design (3 Credits)
Intended for graduate students who want a more thorough grounding in human factors than is provided by DEA 3510. Implications of human physical and physiological characteristics and limitations on the design of settings, products, and tasks. An introduction to engineering anthropometry, biomechanics, control/display design, work physiology, and motor performance. Includes practical exercises and field project work.
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Define key concepts and be familiar with terminology in human information processing, physiological and person-technology models for ergonomic design.
- Conduct and report on an ergonomic analysis of a product or system and undertake a comparative analysis.
- Apply critical skills and knowledge to improve the ergonomic design of a product or system and report on this.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6520 - The Ambient Environment (3 Credits)
DEA 6520 is intended for graduate students who want a more thorough grounding in human factors considerations than is provided by DEA 3500. Introduces human-factor considerations in lighting, acoustics, noise control, indoor air quality and ventilation, and the thermal environment. Views the ambient environment as a support system that should promote human efficiency, productivity, health, and safety. Emphasizes the implications for planning, design, and management of settings and facilities.
Exploratory Studies: (CU-SBY)

Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2022, Fall 2021
Learning Outcomes:

- Explore key concepts in each of the major topic areas covered i.e. indoor climate (thermal conditions, ventilation and air quality), indoor lighting, and indoor acoustics.
- Understand environmental measurement techniques and be familiar with methods.
- Understand how recent transformations in technology have influenced the design of the ambient environment, including the Ambient Intelligence (AmI) paradigm and its opportunities for designing intelligent environments.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6530 - Planning and Managing the Workplace: Evidence-based Design and Organizational Ecology (3 Credits)
Work environments have cultural, health, performance and economic implications for a society, community, organization, or individual. Workplace has transformed during the post pandemic era. The environmental, operational, social and cultural elements of the future workplace are in flux and the vision for the future workplace offers an opportunity for innovation and transformation. We will join industry leaders to collectively solve this paradigm. During the class, we will combine practical tools and scientific knowledge from sychology, Organizational Behavior, User Experience Design, Systems Engineering, Human Factors, Cognitive Engineering, Human Centered Design and Architecture to create a successful vision for the high performing workplace of the future.
Enrollment Information: Enrollment limited to: graduate students.
Last Four Terms Offered: Fall 2024, Fall 2013, Fall 2012, Fall 2011
Learning Outcomes:

- Learn about the latest science and practice in workplace design, operation, and management.
- Gain competency to assess and analyze forms of work and identify appropriate solutions to maximize the targeted outcomes (health, satisfaction, creativity, communication, safety, performance, and efficiency) through design, operation, and management (Design Project).
- Direct one's own learning to seek the critical knowledge needed to solve problems using qualitative methods (Stakeholder Poster Project).
- Practice creativity and synthesize the acquired knowledge of workplace design to generate innovative approaches to critical issues facing workers and employers (Innovation Project).
- Develop written, spoken, and visual communication skills to communicate complex topics.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6540 - Policy Meets Design: High-Impact Facilities of the 21st Century (3 Credits)
Crosslisted with SYSEN 6450
This course has been co-created and co-led by forward-thinking community, national and global leaders. This course challenges our notions on the ways policy and design can empower people, organizations, and communities to achieve health-related operational and business objectives. In this class, we think critically together and apply a systems approach to analyze policies, identify environmental strategies, and propose and design solutions to improve lives. Course modules examine how concepts such as environmental psychology, behavioral economics, spatial analyses, human centered design, LEAN, and systems approach can be used to optimize environments and policies to produce healthy, and sustainable facilities and communities. We study the issues from multiple stakeholder perspectives, explore bottom up and top down approaches to catalyze positive change. The lessons learned and case studies shared are from health and healthcare and can be applied by the students to their area and sector of interest. Students contribute actively to the course content by customizing their readings and leading discussion sessions on a weekly basis.
Last Four Terms Offered: Spring 2014, Spring 2013, Spring 2012, Spring 2011
Schedule of Classes (https://classes.cornell.edu/)

DEA 6550 - Healthcare Innovations (3 Credits)
Engage in a dialogue among design, health, medicine, policy, engineering, and management disciplines on innovations in healthcare through multidisciplinary practice. Learn about the latest concepts of evidence-based design (EBD) and healing environments, discuss practical applications, and have the option to gain skills for Evidence-based Design Accreditation and Certification (EDAC).
Enrollment Information: Enrollment preference given to: graduate students and upper-level undergraduates.
Last Four Terms Offered: Spring 2025, Spring 2022, Spring 2021, Spring 2019
Learning Outcomes:

- Learn about the impact of healing environments on personal, social, and organizational outcomes and identify the environmental causes of current operational challenges.
- Engage in multidisciplinary dialogs to boost practical competencies to improve healthcare outcomes.
- Discuss issues and appropriate solutions to transform healthcare experiences and prepare for related fields in health organizations, industry, government, and academia.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6560 - Research Methods in Social Sciences (4 Credits)
For graduate students who want to gain an understanding of research design and methods. Course begins with fundamentals of research design and covers internal and external validity, measurement reliability and validity, and a variety of tools and techniques.
Distribution Requirements: (SBA-HE)
Last Four Terms Offered: Fall 2024, Fall 2023, Fall 2021, Fall 2020
Learning Outcomes:

- Comprehend terminology and logic of research design.
- Design and conduct research of your own, with an understanding of your study's strength and limitations.
- Critically analyze others' research design, methods, and conclusions.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6650 - Poverty, Children and the Environment (3 Credits)
Crosslisted with HD 6650
This seminar examines how the physical and social contexts of disadvantage shape child development. We investigate how childhood disadvantage influences biology and health as well as cognitive and socioemotional development through the settings disadvantage children grow up in.
Last Four Terms Offered: Fall 2022, Fall 2020, Fall 2019, Spring 2018
Learning Outcomes:

- In depth knowledge of poverty and child development.
- Write a grant proposal.
- Lead in class discussion.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6700 - Applied Ergonomic Methods (3 Credits)
Intended for graduate students who want a more thorough understanding of applied ergonomic methods than is provided by DEA 4700. Each student is required to attend DEA 4700 lectures, meet with the instructor and other graduate students for an additional class each week, and complete additional readings and projects. Covers physical and cognitive ergonomic methods and techniques and their application to the design of products and modern work environments. Emphasizes understanding key concepts. Covers conceptual frameworks for ergonomic analysis, systems methods and processes, a repertoire of ergonomics methods, and techniques for the analysis of products, work activities and work systems.
Prerequisites: DEA 6510.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023, Spring 2022
Learning Outcomes:

- Explore a wide variety of conceptual and methodological issues in cognitive ergonomics and physical ergonomics, contextual models of ergonomics and their impact on the choice of analytical methods.
- Conduct an ergonomic analysis for both physical and cognitive ergonomics topics.
- Develop and frame ergonomic recommendations for workplace ergonomic problems.

Schedule of Classes (https://classes.cornell.edu/)

DEA 6800 - Ethical Design: Engine of Positive Change (3 Credits)
Crosslisted with FSAD 6800
Modern society faces various issues which are all closely related to the ethical aspects of design: humanitarian crises, labor exploitation, injustice in the workplace, loss of diversity, over-consumption, pollution, lack of transparency and pseudo-solutions to name a few. This course will discuss various ethical issues in design that impact individuals, community/society, economies, cultures, social dynamics, and the environment. Students will identify and analyze critical ethical problems and explore solutions through class activities.
Last Four Terms Offered: Spring 2025, Spring 2024, Spring 2023
Learning Outcomes:

- Think critically about the main fields of design practice, identifying the ethical challenges of each in terms of current environmental, social, and health crises.
- Investigate the impact of unethical design, production, and marketing practices on individuals, social groups, and the environment.
- Identify the difference between pseudo-solutions that mitigate the symptoms of harmful practices and those initiatives and approaches that address the harm caused by the current production and consumption systems.

Schedule of Classes (https://classes.cornell.edu/)

DEA 7100 - DEA Graduate Pro Seminar (1 Credit)
This pro seminar meets once per week, and consists of professional development workshops (e.g., grant writing, scholarly presentations, research communications, IRB, nonacademic career) as well as student presentations of thesis development. The goal is to support young graduate students optimize their graduate experience at Cornell.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 8990 - Master's Thesis and Research (1-15 Credits)
Thesis research for Design + Environmental Analysis (DEA) master's students.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)

DEA 9990 - Ph.D. Thesis and Research (3-12 Credits)
Dissertation research for Design + Environmental Analysis (DEA) Ph.D. students.
Last Four Terms Offered: Spring 2025, Fall 2024, Spring 2024, Fall 2023
Schedule of Classes (https://classes.cornell.edu/)