EXPERIENCE DESIGN (EXP)

EXP 170 | MAKE IT AT DEPAUL | 2 quarter hours
(Undergraduate)
This course combines the technical 'how to' skills of making, with more fundamental ideas underpinning the thought processes behind creative and design thinking that emerge through making. Throughout this course, students will be provided with contexts through which to learn, while being given the latitude to follow their intuition and to find their own problems. Students will tinker with digital fabrication, embedded systems, and hardware design through individual and group projects. No prior experience is required.

EXP 210 | DESIGN AND FABRICATION FOR PHYSICAL SPACE WORKSHOP | 2-2.25 quarter hours
(Undergraduate)
This workshop introduces students to design principles for public spaces and physical interaction. Students will explore space through wayfinding, installations, kiosks and other projects to understand the role technology plays in varying environments. A focus on 3D design principles and ergonomics will be a prominent theme throughout the course. Students will experiment with various materials, including cloth, clay, 3D printing and other 3D modeling materials.

EXP 250 | HARDWARE DESIGN BASICS WORKSHOP | 2-2.25 quarter hours
(Undergraduate)
This workshop applies problem solving and programming skills toward building physical systems using an array of fundamental skills. The course will cover basic electronics and hardware skills like soldering, circuit building, and basic programming for an electronic prototyping platform to interface with digital and analog inputs (sensors), control motors, and use displays. Throughout the workshop you will work in groups to build basic physical systems (e.g., controlling LEDs) to moderately sophisticated ones (e.g., developing remote controls).
GAM 240 or CSC 241 or IT 130 is a prerequisite for this class

EXP 340 | DESIGNING FOR AUTONOMY | 4 quarter hours
(Undergraduate)
Through the emergence of open source software, as well as widely-available and inexpensive hardware, creating autonomous robots has become easier than ever. This hands-on course will cover the evolution of robotics, including the concepts and philosophy behind autonomy that govern seemingly organic behavior. Student groups will use a framework to develop robots with a wide range of behaviors, including following, patrolling, avoiding, and exploring. Accompanying lectures will cover the theory and practical application behind designing for organic behavior.
EXP 250 and EXP 210 are prerequisites for this class.

EXP 350 | DESIGNING FOR THE INTERNET OF THINGS | 4 quarter hours
(Undergraduate)
From everyday household items like thermostats and locks to cities developing arrays of climate and traffic sensors, the world is increasingly becoming an interconnected system of aware and responsive devices. This course will cover the development and evolution of our connected world, and the possibilities for designing future products. Students will be introduced to ambient intelligence through exercises, collaborative projects, in-depth discussions, and instructor-led tutorials. The course will cover ambient sensing, communication, embedded systems, and designing experiences for the Internet of Things. Students will be familiar with the considerations involved in designing an interconnected system, and work in groups to prototype an "IoT" product.
UXD 210 and EXP 250 are the prerequisites for this class

EXP 360 | PHYSICAL & INTERACTIVE EXHIBITS | 4 quarter hours
(Undergraduate)
With the introduction of new, widely-available interactive technologies, physical computer-based exhibits are adapting to incorporate multi-touch interfaces, motion-sensing spaces, and interconnected systems. In this workshop, students will explore the development of interactive exhibits while utilizing skills in interaction design, physical technology, and desktop fabrication. Accompanying lectures will cover the affordances of physical space in design and the utilization of augmented reality, real-time sensing, eye tracking, and other technologies while rethinking how technology is used in museums and other public spaces.
EXP 250 and EXP 210 and UXD 210 are prerequisites for this class

EXP 370 | GAMES AND PLAY IN PHYSICAL SPACE | 4 quarter hours
(Undergraduate)
This course introduces hardware design and programming to designers and artists. Students will cover the knowledge needed to craft interactive experiences using microcontrollers, electronics, and programming. Students will experiment with circuitry, soldering, and designing for an electronic prototyping platform while developing small-sized physical games. No prior programming experience is required.
EXP 250 is a prerequisite for this class.

EXP 390 | PHYSICAL TECHNOLOGY COLLABORATIVE STUDIO I | 4 quarter hours
(Undergraduate)
This is the first course in a two-quarter sequence. The second quarter will be EXP 391. You will earn four quarter hours of credit for each quarter for a total of eight quarter hours of credit. you must complete both quarters to receive any credit. Students explore studio-based collaborative creation of physical technology projects and work processes. Students will work together in cross disciplinary teams to research and define design challenges that will be solved through the creation of physical technology projects. Students may work with community partners or other disciplines at DePaul to create applicable solutions with real-world context. Some examples of projects may include wearables, installations, toys, games, etc.
EXP 250 and EXP 210 and UXD 210 are prerequisites for this class

EXP 391 | PHYSICAL TECHNOLOGY COLLABORATIVE STUDIO II | 4 quarter hours
(Undergraduate)
This is the continuation of EXP 390. EXP 390 and EXP 391 must be taken as a sequence in two consecutive quarters.
EXP 390 is a prerequisite for this class.