ME/IE 444/445 (IPD)  
Interdisciplinary “X” Development  
is still open for 2023-2024

Engineering, design*, and business students work together in teams.

IXD is a year-long curriculum in Interdisciplinary (Solution, or X) Development (formerly Interdisciplinary Product Development, but since solutions may be systems or services instead of products we now use “X”) at UIC that partners with companies to generate innovation for the partner and provide a real-world educational experience for students from diverse disciplines including Business, Design, and Engineering.

Project teams conduct in-depth human-centered research and develop targeted, innovative concepts and prototypes for both physical and digital solutions.

Instructor and Time: The course meets Monday afternoons from 2-5pm. Michael Scott will be the MIE instructor, together with colleagues from design (Noah Wangerin) and business (Samantha Melchiori).

Course Content (What will you learn?): Developing innovative solutions requires understanding people, understanding design, understanding technical systems, and understanding the financial environment. In this class, you will learn how to work with students from non-engineering fields to identify what users need and develop solutions to address the real problems. Every solution will include both hardware and software – when defining your problem in the fall semester, you specify the problem you will work on spring semester.

The class substitutes for senior design. Engineering students in IXD complete the ME/IE396 labs in the fall and produce many of the same deliverables in the spring. One big difference is that the student teams in IXD are also expected to

* Graphic design, industrial design, user experience design
identify and make a business case for the problem they want to solve. The companies on the MIE department’s Industrial Advisory Board say that this is one of the most important skills they wish our graduates had.

- We expect multiple sponsors in 2023-2024. So far Bosch is pretty much confirmed, OSF Healthcare is likely, and there may be more.

**Timing:** This is a year-long course; students must commit to take the course both semesters on **Monday afternoons from 2:00-5:00**. Classes will meet at the UIC Innovation Center at 1240 W. Harrison. If you end up with a required class in Spring 2024 that conflicts with IXD, we can work that out.

**Some fine print:** All IXD students will need to sign a non-disclosure agreement (NDAs) and a photo/releasing of student work consent form that we send to the partner company.

**Undergraduate Credit (both IE and ME):** ME/IE 444 and 445 together cover the Senior Design requirement, but they do NOT also provide an additional technical elective. Undergraduates are eligible for IXD if they are eligible for ME/IE396. ME students will have an introductory CAD project just as in ME396, and IE students will have an introductory data science project just as in IE396.

**How to Apply:** Please read and follow the following directions carefully. We are looking for people who are able to read, process, and respond to the level of detail included here. We can only take a limited number of students. If you are interested in the class, please send an email to Dr. Scott (mjscott@uic.edu) giving:
1) your name,
2) your UIN,
3) your UIC email,
4) your major,
5) The following statement (please copy and paste): “I understand that the course is a year-long commitment. I understand that the course includes a significant amount of non-technical collaboration with other disciplines. If I am an undergraduate, I understand that the course will cover my Senior Design requirement but will not cover a technical elective, and that it has the same prerequisites as 396.”
There are still spots in IXD. As of today (April 20, 2023), we are accepting applications on a first-come-first-served basis.

**Registration:** Students who are admitted to IXD will be given an override to register. If you are an undergraduate you should already have signed up for Senior Design. You may drop Senior Design after you are admitted to IXD.

The old IPD website at [http://www.ipd.uic.edu](http://www.ipd.uic.edu) has some information from past years.

Please contact the instructor ([mjscott@uic.edu](mailto:mjscott@uic.edu)) with any questions.