ME/IE 444/445 (IPD)

Interdisciplinary X Development

is open to Seniors for 2021-2022

Engineering, design*, marketing, and public health students work together in teams to develop innovative solutions with a sponsoring partner:

IXD is a year-long curriculum in Interdisciplinary X Development (formerly Interdisciplinary Product Development, but since solutions may be systems or services instead of products we 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.

The IXD courses focus on the early stages of the product development process.

Project teams are directed in conducting in-depth human-centered research and developing targeted, innovative concepts and prototypes for both physical and digital solutions.

Instructor: There is one IXD course for 2021-2022. The time has not been finalized, but is expected to be Monday afternoons from 2-5pm. Michael Scott will be the instructor.

Course Content (What will you learn?): Developing innovative solutions requires understanding people, understanding design, understanding systems, and understanding the financial environment. From a technical point of view, many solutions require both data analysis and computer programming, and only a few require but engineering alone is not sufficient to identify and solve the relevant problems. In this class, you will learn how to work with students from

* Graphic design, industrial design, user experience design
non-engineering fields to identify what users need and develop solutions to address the real problems.

- The class will probably be sponsored by the Order of Saint Francis Healthcare (OSF Healthcare). Most sponsors are for-profit companies that sell products to consumers; OSF is a non-profit healthcare provider with a service mission. Industrial Engineering seniors and Mechanical Engineering seniors interested in data science are especially encouraged to apply for this section. I will let you know if sponsorship changes.

Timing: This is a year-long course; students must commit to take the course both semesters on Monday afternoons from 2:00-5:00. It is strongly suggested to keep the evening free after class if possible. Classes will meet at the UIC Innovation Center at 1240 W. Harrison if we are allowed on campus. If you end up with a required class in Spring 2021 that conflicts with IPD, we can work that out.

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.
Starting Fall 2021, IXD will have the same prerequisites as ME396 and 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 expected semester of graduation,
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 technical content
includes data analytics and programming, and that there may not be any physical products. I understand that the course includes a significant amount of non-technical collaboration with other disciplines. I understand that the course will cover my Senior Design requirement but will not cover a technical elective. I understand that it has the same prerequisites as 396.”

**All applications received by the end of advising week will go into a lottery.**

**What to do during advising week:** Please sign up for Senior Design so that you have a spot reserved if we are not able to accommodate you in IXD, and please go ahead and register for Senior Design when registration opens. If you are admitted to IXD you will be given an override to register for IXD, and you will then be able to drop Senior Design.

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.