

**DSCI D592 Data Science In Practice (DSIP)**  
**Spring 2022 Syllabus**  
Instructors: Nasim Anousheh

**OVERVIEW**

**Course Description.** This course is designed to help students experience the complexities and nuances of applying data science in the real world. Students will work in teams to tackle real-world problems in ongoing and new projects defined by a project sponsor. Project sponsors can be academics or industry practitioners. Students will need to work with the project sponsor and other team members (some team members may have previously worked in the project) to understand the problem domain, decide on a role, identify where their data science skills can be applied, and to work on a solution; in this regard much of the course is about moving from ambiguity to an achievable outcome. During the course, students will also study aspects of data science consulting and project management through weekly reading assignments. The emphasis in this course is on the learning experience over the technical outcomes in the projects.

**Learning Goals.** After completing this course, students will have practical experience working in a complex team environment using their skills to solve a real data science problem in an application domain; be able to go into an ambiguous situation and identify concrete opportunities; and understand multiple perspectives on data science consulting and project management.

**Class Times & Attendance.** This is a fully online course. The majority of the work in this class is self directed, and is carried out in coordination with the project team. Students should meet regularly (physically or virtually) with the team and/or project sponsor. We will run a weekly Data Science In Practice Clinic to help students address roadblocks with their projects. The meetings will be held every week on Wednesday at 7PM Eastern Time on Zoom, so please be sure to reserve that time. Zoom link <https://iu.zoom.us/j/83393862707>.

**Course Communications.** All procedural announcements and assignments will be handled within the Canvas site for this course, except as otherwise noted. If you wish to contact the instructor by email, you can do so at [nanoushe@indiana.edu](mailto:nanoushe@indiana.edu). Contact details for the associate instructors will be provided at the start of the course.

**Course Tools.** Canvas will be used for announcements and submission of milestone documents (see below). Basecamp will be used for all communications about projects. Zoom will be used for live video calls.

**Grading.** Students are graded based on project submissions as detailed below.

**Textbooks.** The textbooks for this course are:

*Block, P. Flawless Consulting: A guide to getting your expertise used, 2nd ed., Pfeiffer A Wiley Imprint, 3rd edition, 2000. 389 pages)* and *Godsey, B. Think like a Data Scientist. Manning Publications Co. 2017. 298 pages.*

## CLASS MILESTONES & EVALUATION

The majority of the work in this class is self-directed, and is carried out in coordination with the project team. However there are some milestones that are used to help you be successful in the class, and to help the instructor ensure you are progressing in the class.

**Milestone 1: Self-evaluation.** The first 2 weeks of the course will be dedicated to helping students understand their current skills and interests, and their learning goals for this course, as well as introducing them to the projects they could work on. Students will need to submit a skills and goals questionnaire that addresses their current skills and interests, and the skills and interests they would like to develop. After this, students will select an initial project to start working on, although it is okay to work on multiple projects or switch projects throughout the semester though you will need approval from the instructor to do so.

**Milestone 2: Progress, roadblocks and challenges.** This is a report submitted mid-semester in which students self-evaluate their progress towards their learning goals, any changes to learning goals, roadblocks and challenges, and what they think they need to do to be successful in the rest of the course.

**Milestone 3: Handing on the baton.** This is a forward-looking document that describes what you think the next steps are for the projects you have been working on, and remaining challenges and obstacles to overcome. If helpful, you can do this as a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats). Students will be graded based on their level of engagement with the projects and with the class materials and assignments, including (a) progress on projects, including posting on Basecamp (b) discussing class materials in DSIP clinic session and on Basecamp and (c) submission of milestone documents.

## **THE SMALL PRINT (PLEASE READ!)**

### **Student Conduct, Rights, and Responsibilities**

All students are expected to submit their own original work. Plagiarism constitutes using others' ideas, words or images without properly giving credit to those sources. If you turn in any work with your name affixed to it, we assume that work is your own and that all sources are indicated and documented in the text (with quotations and/or citations). We will respond to acts of academic misconduct according to university policy concerning plagiarism; sanctions for plagiarism can include a grade of F for the assignment in question and/or for the course and must include a report to the Dean of Students Office.

For more information on our expectations for student conduct, please refer to the Code of Student Rights, Responsibilities, and Conduct <https://studentcode.iu.edu/index.html>.

### **Email Etiquette**

Please allow at least 24 hours for a reply to your emails, and we will do the same for you. Please put "DSIP" in the Subject line and remember to sign your email with your name. We expect the language and structure of your emails to be professional. This includes punctuation, salutations/signature, etc.

### **Sexual Misconduct and Title IX**

As your instructors, one of our responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with:

- The Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services)
- Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services)

- IU Health Center at (812) 855-4011 (health and medical services)

It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist. We encourage you to visit [stopsexualviolence.iu.edu](http://stopsexualviolence.iu.edu) to learn more.

### **Classroom Behavior**

Everyone is expected to conduct themselves professionally during this course, especially as it involves working with external project sponsors and in a team environment. This includes arriving on time to meetings and being polite and courteous. Professional behavior also entails being respectful of others and their opinions—even and especially when you do not agree with them.