Designing for Defense (D4D) 2023

ASEN 5519 / CSCI 5550 / CYBR 5550

Instructor Information

This course uses a team teaching model and "flipped classroom" concept. Students will interact with all of the instructors listed below. Most class presentations will be given by the students with the instructor team providing critiques, advice, and insights.

Teaching Team:

Andy Meyer: meyerandy1228@msn.com (preferred), or andrew.f.meyer@colorado.edu. Phone :, Office Hours: Virtual and by appointment.

From your Teaching Team

This course teaches student how to develop and test hypotheses in order to **solve real-world Department of Defense (DoD) and Intelligence Community (IC) problems**.

Student teams will learn how to develop and deploy solutions for the DoD/IC community. Each team is assigned one problem from an existing set of provided by the DoD/IC community and will work on that problem throughout the semester. Each week the teams are expected to interview six or more potential project beneficiaries (typically military and government end users), produce and update a Mission Model Canvas, produce and update a Minimal Viable Prototype.

Each week the teams present their outcomes along with updated Mission Model Canvas (MMC) and Minimum Viable Product (MVP). At the conclusion of the course students will have been challenged to:

1. Solve complex real-world problems
2. Rapidly iterate technology solutions while searching for product-market fit
3. Understand all the stakeholders, deployment issues, costs, resources, and ultimate mission value

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You were enrolled in Designing for Defense through competitive selection. We consider you to be elite and expect you to behave as elite. You will exercise considerable autonomy in this course, deal with sensitive information, and interact with stakeholders who have real-world

missions with potentially lethal consequences. These stakeholders have volunteered their time, at cost from other national security activities, to interact with you, and through you, with the University of Colorado Boulder. This course demands maturity. Please understand that we cannot, and thus will not, tolerate less. Exercise your judgment, and feel free to discuss with your instructors at any time.

The challenges are varied: some seek a technical solution, others ask difficult contemporary policy questions, still others need business process improvement. But no matter the challenge, the course will be driven by your ability to understand and intellectually empathize with real-world national security professionals and apply entrepreneurial methods to envision novel solutions.

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- Students will learn how to develop a mission directed Value Proposition Canvas (**VPC**).
- Students will learn how to adapt a business model canvas into a mission model canvas that is better suited to the Department of Defense and Intelligence Communities.

3. Understand how to rapidly develop and demonstrate a Minimum Viable Product **(MVP)**.
   - Students will learn how to construct an MVP that demonstrates the key ideas behind a Value Proposition.
   - Students will learn to demonstrate MVPs to a wide range of stakeholders.
   - Students will learn how to iterate an MVP based on lessons learned.

Course Schedule

Please refer to Canvas for updated information. The **course schedule will be modified as required based on our progress**. Roughly speaking, the course will consist of **three phases**.

1. **Lecture**: In the first (approximately) seven weeks, we will learn how to deploy the tools for applying startup methods to national security problems. In this first phase teams will be providing the class with a **status update** each week. Teams learn:(e t)D4 (.2 (y)4 (prt)12 (h c)3.9 (l

Assignments

Outside of class, you will be expected to conduct the following:

- **Weekly Beneficiary Interviews:** Your team is expected to **conduct six to ten interviews per week**, starting in Week 2. Your team is responsible for scheduling interviews and must contribute to identifying interview candidates.

- **Weekly Mission Model Canvas Updates:** After Week 2, your team must provide a **weekly update to your Mission Model Canvas** (MMC). Each week emphasizes a different aspect of the MMC and you are expected to fill in a portion. The entire canvas should

a. You will be assessed, as a team, on:
    i. The quality of your **final pitch** at the D4D Finale
    ii. The final **Zoom call presentation to your sponsor**
    iii. The final **product/solution deliverable** (your MVP) as presented to your sponsor in the final conference call

If you have any questions about your grade or how you are being assessed, please do not hesitate to contact your instructors. If you have extenuating circumstances and are unable to

permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution
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