IDS 460/560: DESIGNING SOLUTIONS FOR DEFENSE – SPRING 2026

Course: IDS 460/560 DESIGNING SOLUTIONS FOR DEFENSE

Cross-Listed: CJ 480, CJ 580, CMS 450, CSC 492, CSC 691, IDS 460, IDS 560, MGT 492

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TA: TBD

Location: SCH 2018 - Healthcare Marketing Lab, Scianna Hall (inside The Hatchery)

Day / Time: Wednesdays, 1:00 PM – 3:45 PM

Office Hours: By Appointment

Webpage(s):   http://ds4d.usm.edu/
https://www.h4d.us/ (national H4D website)

Texts: <u>Required</u>
Constable, G., Rimalovski, F., & Fishburne, T. (2014). *Talking to Humans: Success starts with understanding your customers*. Middletown, DE.: Giff Constable. (free PDF version at http://www.talkingtohumans.com/download)

<u>Optional</u>
Stone, D., & Heen, S. (2015). *Thanks for the feedback: The science and art of receiving feedback well: (even when it is off base, unfair, poorly delivered, and frankly, you're not in the mood)*. London: Portfolio Penguin.

Osterwalder, A., & Pigneur, Y. (2013). *Business Model Generation: A handbook for visionaries, game changers, and challengers*. New York: Wiley & Sons.

Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A., & Papadakos, T. (2015). *Value Proposition Design: How to create products and services customers want*. Somerset: Wiley.

Resources: Additional course resources, including any required videos and supplementary materials, can be found in the **Course Resources** section at the bottom of the syllabus.

Course Goal: Provide hands-on experience working with the Department of Defense (DoD) to develop innovative solutions to real challenges they are currently facing, while learning a problem-solving process based on the Lean Startup methodology.

Notes:

1. The national baseline Hacking for Defense ("H4D") course, provided by the national program, is a 10-week course. The USM semester is usually 16 weeks. Therefore, some of the team-building tasks done prior to H4D at other universities will be incorporated into the first few weeks of class.

2. Each team is expected to interview a minimum of 10 beneficiaries before the Week 3 class, and between every subsequent class until Final Presentation.

3. Every student in the class will be expected to speak to the entire class (including instructors and visitors) in alternating weeks for a total of at least 7 presentations. Every student is also expected to participate in the weekly interview process conducted by their teams to gather information from external experts for these presentations. Students will receive feedback on their presentation performance directly from instructors and other students throughout the course, both during and outside of class. Consequently, this course meets the University's **Speaking-Intensive Requirement** (GEC 08), which states:

   *Competence in oral communication requires knowledge of the goals, rules, and audience in a particular situation; motivation to perform effectively; and the ability to make a skilled presentation. The Speaking Intensive (SI) component should enable students to acquire appropriate oral communication skills. SI courses **must include at least two SI-related assignments, guidance and instruction in preparing those assignments**, and a **clear evaluation procedure to provide students with feedback about their work**. Speaking assignments can include formal speeches, **research presentations**, lectures, **small group presentations**, debates, **interviews**, etc. Students should experience oral communication in ways that are germane to and will best serve them in their disciplines.*

SEE SEPARATE SCHEDULE DOCUMENT
FOR THE CURRENT YEAR'S DATES, MODULES, AND TOPICS

OVERVIEW

DESIGNING SOLUTIONS FOR DEFENSE (DS4D) is the USM class that participates in the national HACKING FOR DEFENSE (H4D) program. H4D is designed to provide students the opportunity to learn how to work with the Department of Defense (DOD) and Intelligence Community (IC) to better address our nation's emerging threats and security challenges. Unlike current practices in the DoD/IC that can stall and in some cases thwart rapid innovation, this course will provide a platform that can develop prototypes that match DOD/IC users' needs in weeks. Agencies or Commands in the Department of Defense and Intelligence Community may provide follow-on funding to these student teams for further refinement and development of prototypes.

In this DS4D/H4D class, student teams may either select from an existing set of problems provided by the DoD/IC community or, under certain circumstances requiring instructor approval, introduce their own ideas for problems (which may originate from federal, state, or local government agencies other than the DoD or IC) that need to be solved. Although teams pick a problem to solve, DESIGNING SOLUTIONS FOR DEFENSE is not a product incubator for a specific technology solution. Instead, it provides teams with a deeper understanding of selected problems and the host of potential technological solutions that might be arrayed against them. Using Lean Startup methodologies, the class focuses teams to:

1. Solve extremely 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 mission value.
4. Gather feedback on minimum viable products (MVPs) that aid in learning more about the problem and potential solutions in an extremely short time.
5. Produce a repeatable model that can be used to launch other potential technology solutions.

HOW YOU'LL LEARN

Flipped Classroom	We expect you to review the assigned lecture materials for the upcoming week *before* class, and we will use time *in* class to discuss questions about the lecture materials and to provide supplemental material. The information in the assigned videos and readings is essential for you to complete your weekly interviews and to present the insights the teaching team will expect in your presentation for that week. You need to come prepared with questions or comments about the material for in-class discussion. We will cold-call students to answer questions about the online lecture material.
Experiential Learning	You will be spending a significant amount of time in between each of the lectures outside the class talking to customers. Each week, beginning during week 2, your team will conduct at least 10 customer interviews focused on a specific part of the business model canvas. This class is a simulation of what startups and entrepreneurship are like in the real world: chaos, uncertainty, impossible deadlines in insufficient time, conflicting input, etc.

Inverted Lecture Hall	Joining the class each week are experienced instructors and professionals who have built and/or funded world-class startups as well as seasoned military professionals with significant experience in the field. Your instructors won't be lecturing in the traditional sense, but rather commenting and critiquing on each team's progress. While the comments may be specific for each team, the insights are almost always applicable to all teams. Pay attention.
Peer to Peer Culture	While other teams are presenting the results of their weekly experiments, the rest of the class is expected to attentively listen, engage, and react to what they see and hear. Sharing insights, experience, and contacts with each other is a key way that this unique laboratory achieves results.
Class Culture	Startups communicate in a dramatically different style from the university or large company culture you may be familiar with. At times it can feel brusque and impersonal, but in reality is focused and oriented to create immediate action in time- and cash-constrained environments. We have limited time and we push, challenge, and question you in the hope you will quickly learn. We will be direct, open, and tough just like the real world. This approach may seem harsh or abrupt, but it is all part of our wanting you to learn to challenge yourselves quickly and objectively and to appreciate that as entrepreneurs you need to learn and evolve faster than you ever imagined possible. This class pushes many people past their comfort zone. If you believe that the role of your instructors is to praise in public and criticize in private, you're in the wrong class. Do not take this class. You will be receiving critiques in front of your peers weekly. The pace and the uncertainty pick up as the class proceeds. As part of the process, we also expect you to question us, challenge our point of view if you disagree, and engage in a real dialogue with the teaching team.

GRADING

This course is team-based, and 85% of your grade will come from your team progress and final projects. Your peers will also grade your contribution to your team. The grading criteria as follows:

Individual in-class participation and course engagement – 15%

1. Written feedback to other teams provided throughout the semester, during class presentations via the webform.
2. Active attendance at each class.
3. Timely viewing of course lecture materials, evidenced by performance on short content quizzes.
   a. There will be more quizzes earlier in the semester, and fewer as you gain your footing on the Lean Startup methodology.

Team weekly coursework – 30% *

1. Minimum of 10 stakeholder interviews per team per week.
   a. Number of interviews is a multiplier for each week's coursework:
      10% per interview; minimum of 5 per week or the multiplier is 0%
2. Weekly class presentations/updates of work and experiments.
   a. Present a detailed visual and spoken report on what the team did each week.
   b. Identify which team member did which portion of the work.
3. Interview summaries on the course Teams site.
   a. Post about **every** stakeholder you engage with: who/when/how/what
   b. Note which team member is the primary author of the post – each team member must write at least three posts throughout the semester
4. Infographics within each presentation tracking your week-to-week:
   a. Number of stakeholder interviews conducted
   b. Number of hypotheses tested
   c. Number of positive, negative, or partially supported results
   d. Emotional level from 1-10

Team final videos – 25% *

Each team will create and submit two videos which parallel the Team Final Presentation, described in more detail below. Each of these videos is expected to be 3 minutes or less.

Team final presentation – 30% *

The final presentation combines the elements included in the team's two video submissions, covering both their "journey" and their solution.

* These totals are multiplied by a "peer review multiplier" of 0% to 100% as attributed to each student by their teammates at the end of the semester via their scores on the Peer Reviews. To get an idea of where each student stands with respect to this multiplier, Peer Reviews will be collected mid-course but these will not affect the final grade.

<div style="background-color:orange">FINAL ASSIGNMENTS</div>

The final project for this class consists of 3 parts—a video summarizing the team's "journey" over the course of the semester, a video summarizing the team's proposed solution, and a final presentation to accompany the solution video. To assist with this, we offer the following guidance.

Team Videos

Each team will create two 3-minute videos that will be uploaded for posterity to the class YouTube site (www.youtube.com/@USMDS4D). While storytelling quality is critical, high production value is not. Some of the most effective videos have been simple and straightforward.

> **Video 1 | The Journey**: In the first video, each team will recount their "journey" over the course of the semester, from receipt of the problem to final presentation. This video is not meant to focus on the development of your proposed solution but rather the development of the team

itself. For example, this video should summarize the personal/interpersonal journey your team has undertaken, highlighting key changes in emotional level, development of skills, confidence, and challenges. What will you take away from the course that you can apply in the future? Make it personal and include any key "aha" moments.

Video 2 | The Solution: The second video should summarize your proposed solution. It can be considered a "pitch" video and should contain a summary of the final understanding of the problem, the recommended solution, its justification, and a proposed path forward. While it can include some interpersonal developmental aspects, it should focus on the key customer insights that helped take the team from its initial understanding of the problem to the final solution path.

Final Presentation

On the final day of class, each team will deliver an 8-minute presentation to set the stage for their solution video. The focus of this presentation will be on how teams tackled their problem, how they gathered evidence, and how this evidence impacted and guided their development of a proposed solution. Final Presentations will be followed by 10 minutes of Q&A from the teaching team and invited guests.

A template will be provided for the Final Presentation, but here are a few tips:

- **Graphics**: Use photos, interview quotes, customer workflows, before-and-after diagrams, etc. to *show* what you learned and how you learned it.
- **Jargon**: It's important to understand and acknowledge your audience. While some of our terminology (e.g., interviews, experiments, evidence, iterations, pivots, solutions) is widely understood, some of it (e.g., MVPs, Mission Model Canvas) isn't and should be avoided.

Example Presentations:

http://www.slideshare.net/sblank

COURSE RESOURCES

Online Lectures:
- "Udacity EP345": https://www.udacity.com/wiki/ep245/downloads from the online course https://www.udacity.com/course/how-to-build-a-startup--ep245 (Requires free personal login to view all the content)

Lean Launchpad Resources:
- See http://steveblank.com/category/lean-launchpad/ for more Lean Launchpad resources, in particular his slides and videos: https://steveblank.com/slides/ and two-minute videos: https://steveblank.com/category/2-minute-lessons/
- Steve Blank's Tools & Blogs for Entrepreneurs: http://steveblank.com/tools-and-blogs-for-entrepreneurs/
- Beneficiary Discovery tutorials: http://venturewell.org/i-corps/llpvideos/

- Business Model Canvas: http://businessmodelgeneration.com/canvas/bmc The Business Model canvas is one of the three components of the Lean Method. The Mission Model Canvas we use in Hacking for Defense is a derivative.
- Value Proposition Canvas: http://www.businessmodelgeneration.com/canvas/vpc The Value Proposition Canvas is a subset of the Business & Mission Model Canvas.

Customer Development Videos (These will help with Beneficiary Development)
- https://vimeo.com/groups/190717
- https://vimeo.com/groups/204136
- http://venturewell.org/i-corps/llpvideos/

Utilization of Generative Artificial Intelligence
- Generative Artificial Intelligence (AI) tools are permitted in this class when usage complements the learning outcomes of the course and assignments. Students are required to cite usage of these tools in academic work and will be provided with examples of how to do so to ensure academic integrity.

Intellectual Property Policy

- All students should review the University's current (2021-2024) Policy Statement on Intellectual Property (IP), located at https://www.usm.edu/institutional-policies/

Speaking and Writing Centers
The Writing Center and the Speaking Center are friendly spaces that provide individualized feedback and support to help Southern Miss students succeed with writing and speaking assignments for any class. The Centers offer one-to-one consultations for any stage of the process, including brainstorming, creating an outline, revising, learning editing strategies, and developing presentation skills. In-person and online appointments are available.

To make an appointment, visit usm.mywconline.com and create an account. Instructions for making an appointment can be found at usm.edu/writing-center or usm.edu/speaking-center.
For the Writing Center (Cook Library 112): email writingcenter@usm.edu or call (601) 266-4821
For the Speaking Center (Cook Library 117): email speakingcenter@usm.edu or call (601) 266-4965

Student Accessibility Services
Student Accessibility Services (SAS) is Southern Miss's designated office to assist the University in its commitment to protect the civil rights of students with disabilities. SAS protects students from discrimination and offers reasonable accommodations to give them equitable access to university courses and resources. Disabilities covered under the ADA may include but are not limited to ADHD, learning disabilities, psychiatric disabilities, physical disabilities, chronic health disorders, temporary injuries, and pregnancies. If a student feels that they need classroom or housing accommodations based on a disability they should contact SAS by phone at 601-266-5024, by email at sas@usm.edu, in person by visiting the SAS office located in McLemore Hall, Room 112, or online at usm.edu/sas.

Individuals with hearing impairments can contact SAS using the Mississippi Relay Service at 1-800-582-2233 (TTY) or emailing SAS at sas@usm.edu.

Veterans
If you are a veteran, please use the veterans/service member's resources on campus. They can be found at http://www.usm.edu/military-veterans.

Mental Well-Being Statement: Southern Miss recognizes that students sometimes experience challenges that make learning difficult. If you find that life stressors such as anxiety, depression, relationship problems, difficulty concentrating, alcohol/drug problems, or other stressful experiences are interfering with your academic or personal success, consider contacting Student Counseling Services on campus at 601.266.4829. More information is also available at www.usm.edu/student-counseling-services. All students are eligible for free, confidential individual or group counseling services. ***In the event of emergency, please call 911 or contact the counselor on call at 601.606.HELP (4357).***

Nondiscrimination Statement: The University of Southern Mississippi offers to all persons equal access to educational, programmatic and employment opportunities without regard to age, sex, sexual orientation, disability, pregnancy, gender identity, genetic information, religion, race, color, national origin, and/or veteran status pursuant to applicable state and federal law

Prism LGBTQ+ Resource Office: The Hub, room 114A; lists community resources for LGBTQ+ students; open Mondays to Fridays 8:00 am to 1:00 pm; Tel. #601-266-4453.
Gender-neutral Bathrooms on campus: Honor House (2 each on first and second floor), Johnson Science Tower (first floor), Kennard-Washington Hall (first floor), Payne Center (natatorium), Hickman Hall (2nd floor), R.C. Cook Union (outside of Student Activities Hub), Forrest County Hall (room 101D).

Eagle's Nest Food Pantry: Basement of The Hub, accessible from the back of the Hub; open Wednesdays and Fridays 11:00 am to 3:00 pm.

Student Success and **Student Life** pages contain useful information ranging from directions to campus buildings to available student support services and activities.

Academic misconduct involves deception to improve a grade, earn course credit, complete a degree, or create an unfair academic advantage for oneself or disadvantage to another in the academic community. All students at the University of Southern Mississippi should familiarize themselves with the Student Academic Integrity Policy to become familiar with what actions constitute academic misconduct, a violation of that policy. Southern Miss values "an approach to academics, research, and personal conduct based on integrity and civility" and the Student Academic Integrity Policy supports that University value. Forms of academic misconduct may include, but are not limited to:

- Cheating - Cheating is a broad category of academic misconduct characterized by an attempt to gain academic advantage through inappropriate means or impede the academic achievement of others.
- Plagiarism - The use of another person's or source's words, creative works, or ideas without appropriate quotation or attribution; claiming or submitting for academic credit the work of another.
- Lying - The misrepresentation of one's academic work, lying to an instructor to increase a grade, or lying to an instructor regarding an academic integrity violation.
- Acquiring or Distributing Information Inappropriately - The act of distributing or obtaining course assignments or examination questions or answers from sources not approved by the instructor or proctor (includes, but is not limited to, unauthorized use of the Internet, test banks associated with course text and previous student work).
- Fabrication or Falsification of Data - Any statement of untruth in any matters related to the academic experience, including but not limited to forgery; false claims of authorship; falsification of information, data, or results derived from or related to research or to laboratory experiments.
- Stealing or Defacing - The act of intentionally taking, transferring, defacing, or destroying, without right or permission, any property related to the academic mission of the University, including an attempt to impede others.
- Multiple Submissions - The submission, more than once, without authorization by any instructors involved, of substantial portions of the same work, including oral reports or work submitted for retaken courses.
- Conspiracy - The act of agreeing or planning with any person to commit any violation of the Student Academic Integrity Policy.
- Unauthorized use of artificial intelligence- See the artificial intelligence policy in this syllabus for allowable or non-allowable use of artificial intelligence.

If you commit an act of academic misconduct, sanctions ranging from resubmission of work to course failure may occur to the possibility of receiving a grade of "XF" for the course, which will be on the student's transcript with the notation "Failure due to academic misconduct." Should you be accused of academic misconduct, please visit the Academic Integrity Website or email integrity@usm.edu for any questions you may have about your rights and about the academic integrity process. Southern Miss provides many campus resources that are detailed in this syllabus and will be discussed by your professors; please utilize those to help you learn. At Southern Miss, we care about your personal work and learning journey.