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Feb 05, 2024

Department of Defense  
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

20 December 2023

# **Curricula for Startup Business Operations, Financing, and Intellectual Property**

## ***Recommendations and Strategies for the Defense Acquisition Workforce and Undergraduate Programs***

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*In response to the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2023,  
Section 834(a)(1)*

**Sponsor: Dr. Dennis McBride, AIRC Director, Office of the Under Secretary of Defense for  
Acquisition and Sustainment (OUSD(A&S))**

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Final Technical Report AIRC-2023-TR-017

WRT-1081.16

Task Order (TO) No. 0285

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The Acquisition Innovation Research Center (AIRC) is a multi-university partnership led and managed by the Stevens Institute of Technology and sponsored by the U.S. Department of Defense (DoD) through the Systems Engineering Research Center (SERC)—a DoD University-Affiliated Research Center (UARC).

This material is based upon work supported, in whole or in part, by the U.S. Department of Defense through the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD(A&S)) and the Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E)) under Contract HQ0034-19-D-0003, TO#0285.

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## Acronyms and Abbreviations

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AI	Artificial Intelligence
AIRC	Acquisition Innovation Research Center
DAU	Defense Acquisition University
DCTC	Defense Civilian Training Corps
DMCA	Digital Millennium Copyright Act
DoD	Department of Defense
FY	Fiscal Year
IP	Intellectual Property
IPO	Initial Public Offering
MVP	Minimum Viable Product
NDAA	National Defense Authorization Act
OUSD(A&S)	Office of the Under Secretary of Defense for Acquisition and Sustainment
OUSD(R&E)	Office of the Under Secretary of Defense for Research and Engineering
Sec.	Section
SERC	Systems Engineering Research Center
TO	Task Order
U.S.	United States
UARC	University-Affiliated Research Center
WRT	Washington Headquarters Services (contract) Research Task

## Executive Summary

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The following report is a response to the congressional mandate in Section (Sec.) 834(a)(1) of the National Defense Authorization Act (NDAA) for fiscal year (FY) 2023 to “make recommendations on one or more curricula for members of the acquisition workforce on financing and operations of [startup] businesses.”<sup>1</sup> The mandate across elements of Sec. 834 emphasizes the need for innovative approaches to negotiating intellectual property (IP) and data rights in agreements with startup businesses. This research employed a variety of web-based resources to collect information, identifying a diverse portfolio of over 210 existing online courses and other educational materials.

The proposed curriculum, *Financing and Operations of Startup and Negotiating and Establishing Intellectual Property and Data Rights*, is intended to serve as a comprehensive guide for the Acquisition Innovation Research Center (AIRC) Director to formulate recommendations and enhance the existing educational offerings for the Defense Acquisition Workforce, contributing to the overarching goal of fostering innovation within the government procurement landscape.

**Curricula on Financing and Operations of Startups.** The exploration for a comprehensive curriculum on financing and operations involved a meticulous review of academic resources, leading to a compilation of diverse materials. Sample resources include foundational textbooks, online courses from universities, and traditional university programs. Additionally, the report analysis includes global perspectives and industry-specific training resources. The proposed curriculum in Table 1 and Table 2 of the report encompasses key elements across these resources on startup financing and operations, addressing fundamental aspects crucial for the acquisition workforce and undergraduate students.

**Curricula on Negotiating and Establishing IP and Data Rights.** In response to the directive for innovative approaches to negotiating IP and data rights, additional relevant courses were identified, although limited and directly related to software and software-embedded systems. Courses cover foundational aspects of IP and its applications across industries, providing a comprehensive foundation for navigating IP rights in startup agreements. Table 3 of the report lists key elements across these resources on negotiating and establishing IP and data rights. Sample resources include academic textbooks, online courses, and learning materials from diverse universities.

Finally, existing Defense Acquisition University (DAU) curricula, such as ACQ315 and CON7210, complement the proposed curricula, addressing business acumen and leadership competencies. The collaborative effort aims to enhance the acquisition workforce's capabilities, fostering innovation in government procurement.

Additional research, analysis, and coordination is needed to compare DAU and other Department of Defense (DoD) courses with extramural opportunities; assess the relative depth, approaches, and accessibility of these options; assess the minimum level of literacy in startup business financing, operations, and IP that any or all members of the defense acquisition workforce should have; assess who needs deeper or more advanced levels of training; and consult with domain experts in the DoD, academia, or industry on these topics.

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<sup>1</sup> See Public Law 117-263.

## Section 1: Introduction

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The government mandate in Section (Sec.) 834 of the fiscal year (FY) 2023 National Defense Authorization Act (NDAA) calls for the following three (3) elements:

- “...**make recommendations on one or more curricula for members of the acquisition workforce on financing and operations of [startup] businesses**, which may include the development of new curricula, the modification of existing curricula, or the adoption of curricula from another agency, academia, or the private sector...with varying course lengths and level of study” (Sec. 834(a)(1–2), emphasis added).
- Such curricula shall be applicable to undergraduate students in the DCTC Program as well as government staff in the existing acquisition workforce (e.g., through the DAU or other DoD training institutions). This effort will “**Consider and incorporate appropriate training materials from university, college, trade school, or private-sector curricula in business, law, or public policy**” (Sec. 834(a)(4), emphasis added).
- To the extent possible, the curricula shall include “...**innovative approaches to negotiating and establishing intellectual property and data rights in agreements with [startup] businesses for the procurement of software and software-embedded systems**” (Sec. 834(d)(1), emphasis added).

To meet these objectives, this project started with developing a web crawler programmed to obtain information regarding state-of-the-art Internet courseware and content, specifically: Investopedia<sup>2</sup> and Coursera.<sup>3</sup> **This approach yielded an extensive portfolio of over 210 online university courses and other online resources, traditional university programs, and various industry-specific modules.** The collation of these resources, including textbooks, online courses, and industry blogs, covers various educational materials focused on startup financing, operations, and the crucial interplay between establishing intellectual property (IP) and data rights in agreements with startup businesses.

Below we detail the delineated objectives, exploring the resources and curriculum conceived in response to the directive in alignment with the requirements of Sec. 834. This includes discussions on curriculum development, innovative negotiation approaches, and establishing IP and data rights agreements within startup frameworks. Each segment will align with the unique perspectives, methodologies, and educational material identified in the exhaustive investigation conducted as a foundational stage for this endeavor.

## Section 2: Financing and Operations of Startup Curriculum

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The comprehensive exploration for developing an encompassing curriculum in financing and operations of startup businesses has involved a review of numerous academic resources, seeking to curate a curriculum applicable to the existing defense acquisition workforce as well as

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<sup>2</sup> <https://www.investopedia.com/>

<sup>3</sup> <https://www.coursera.org/>

undergraduate students within the Defense Civilian Training Corps (DCTC) Program.<sup>4</sup> The compilation of resources includes an array of academic textbooks and online courses from reputable universities.

## 2.1 Exhibits

### SAMPLE ACADEMIC TEXTBOOKS

The search for academic resources yielded textbooks regarded as foundational in entrepreneurial studies. Examples include the following:

1. *The Lean Startup* by Eric Ries introduces the concept of a lean startup methodology, advocating for continuous innovation, validated learning, and the Minimum Viable Product (MVP). Ries' principles underscore the importance of validated learning, emphasizing the iterative process that leads to successful businesses, pivoting based on validated customer learnings.
2. *Business Model Generation* by Alexander Osterwalder and Yves Pigneur introduces the Business Model Canvas, offering a visual framework to design, describe, challenge, and pivot business models. The canvas aids in comprehending the crucial elements of a business model, thereby fostering a better understanding of how startups create and deliver value to their customers.
3. *The Art of Startup Fundraising* by Alejandro Cremades is a quintessential guide covering various aspects of startup financing, including the intricate processes of securing investments, understanding venture capital, and the art of pitching to potential investors. Cremades' work sheds light on navigating the complex world of startup financing, shedding light on the strategies that lead to successful fundraising endeavors.

### SAMPLE UNIVERSITY-BASED ONLINE COURSES

The review identified an extensive catalog of online courses offered by esteemed universities. The Duke University series of courses—"Finance for Startups," "Financing for Startup Businesses," and "Entrepreneurial Finance: Strategy and Innovation Specialization"—cover multifaceted topics concerning financing, entrepreneurial strategies, and innovative financial approaches crucial for startups. These courses provide insights into entrepreneurial finance, equipping individuals with the tools required to navigate financial strategy in the dynamic landscape of startup businesses.

The offerings from the University of Maryland and the University of Washington, such as "Developing the Opportunity for Corporate Entrepreneurs" and "Fundamentals for Startups," present a holistic approach, incorporating elements of corporate entrepreneurship and essential startup fundamentals that students and acquisition workforce members can benefit from.

The exploration at Stanford University, Columbia University, Harvard University, and the Wharton Business School also yielded an extensive array of courses and programs catering to the essential aspects of entrepreneurship, strategy formulation, business model development, and financing approaches for startups.

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<sup>4</sup> See <https://dctc.mil/> and 10 U.S. Code, Chapter 113.

This compilation forms the initial steps towards crafting a tailored curriculum addressing the financial and operational facets of startup businesses, bringing together varied resources that cover strategic finance, entrepreneurial methodologies, and startup financial maneuvering.

### **SAMPLE TRADITIONAL UNIVERSITY-BASED PROGRAMS**

Traditional universities have emerged as focal points in delivering specialized courses and programs on entrepreneurship. "The Entrepreneur's Tool Kit for Launching a New Venture" at Stanford University provides a holistic understanding, aiding individuals in comprehending the dynamics of new venture launches. The content facilitates establishing a business and understanding the essential tools necessary for a successful launch.

Columbia University's program on "Developing New Business Ventures: From Ideation to Successful Launch" outlines the journey from ideation to an effective launch, encapsulating the foundational steps to be undertaken by entrepreneurs.

Harvard University's "Technology Entrepreneurship: Lab to Market" equips learners with a systematic approach to technology entrepreneurship, emphasizing aligning business and operating models and evaluating technological readiness for the market.

Wharton Business School's "Entrepreneurship Acceleration Program: Scaling Your Business" offers a comprehensive view of scaling a business, covering various crucial aspects from evidence-based entrepreneurship to pitch elements while instilling innovative strategies for business scaling.

### **GLOBAL PERSPECTIVES AND INDUSTRY-CENTRIC TRAINING**

In addition to national academic resources, international university programs were considered to add a global perspective. Monash University's "Startup Fundamentals: From Setting Up to Securing Investment" delves into various areas, including IP needs, business structures, legal obligations, funding, and ethical considerations in frontier technologies such as artificial intelligence (AI) and blockchain.

The IT University of Copenhagen's "Business and Startup Foundations" offers a versatile approach, encompassing different perspectives on business strategy, marketing planning, financial concepts, and stakeholder analysis, fostering a comprehensive understanding of business dynamics and strategies for startups.

### **INDUSTRY RESOURCES AND ONLINE PLATFORMS**

Beyond academic settings, industry-specific blogs and online platforms (such as those by Alex Osterwalder and Neil Patel) provide valuable insights, offering real-time perspectives into the entrepreneurial world. Moreover, courses—such as Udacity's "How to Build a Startup"—provide hands-on learning experiences, guiding individuals through the intricacies of startup development and the journey from ideation to execution.

## **2.2 Proposed Curriculum Elements on Startup Financing and Operations**

The amalgamation of these diverse resources and training programs represents a fundamental step in developing a curriculum encompassing multiple dimensions of startup financing, business operations, and entrepreneurial strategies.

## STARTUP FINANCING

Table 1 lists key curriculum elements on startup financing, derived from the amalgamation across the resources reviewed.

**Table 1. Key Curriculum Elements on Startup Financing.**

<b>Fundamentals of Startup Financing</b>
<b>Introduction: - Define Startup Financing and Importance of Proper Financing</b>
<i>Module: Funding Options</i>
<ul style="list-style-type: none"> <li>Discuss the complexity of funding options.</li> <li>Explain the various sources of funding and their pros and cons.</li> <li>Explore online platforms and marketplaces for fundraising.</li> <li>Discuss the effort required to secure funding.</li> </ul>
<i>Module: Funding Stages</i>
<ul style="list-style-type: none"> <li>Explain different stages of startup funding.</li> <li>Highlight the quick evolution from one funding stage to another.</li> <li>Discuss executing the business plan at each stage.</li> <li>Explain how social connections can impact funding.</li> </ul>
<i>Module: Financing Strategies</i>
<ul style="list-style-type: none"> <li>Discuss how to craft a compelling funding pitch.</li> <li>Explain strategies to secure the best funding terms.</li> <li>Address the challenges of investing in unproven startups.</li> <li>Explain the path toward an Initial Public Offering (IPO).</li> </ul>
<b>Introduction: - Define Risks</b>
<i>Module: Challenges and Risks</i>
<ul style="list-style-type: none"> <li>Address the challenges faced during fundraising.</li> <li>Explore the risks of fully relying on a single funding source.</li> <li>Discuss the potential for rapid growth and its challenges.</li> <li>Explain the high-risk nature of startup investments.</li> </ul>
<i>Module: Valuation and Investment</i>
<ul style="list-style-type: none"> <li>Discuss methods of valuing a startup.</li> <li>Talk about the assumptions investors make.</li> <li>Explain common rules of thumb in startup valuation.</li> <li>Discuss how belief in the product impacts investment decisions.</li> </ul>
<i>Module: Valuation Methods</i>
<ul style="list-style-type: none"> <li>Discuss revenue-based valuation methods.</li> <li>Address the influence of rumors on valuations.</li> <li>Explain the tax implications of investment payouts.</li> <li>Explore the concept of unicorn startups.</li> </ul>

## STARTUP OPERATIONS

Likewise, Table 2 lists key curriculum elements on startup operations, derived from the amalgamation across the resources reviewed.

**Table 2. Key Curriculum on Startup Operations.**

<b>Fundamentals of Startup Operations</b>
<b>Introduction: - Define Startup Operations and Importance</b>
<i>Module: Introduction to Startup Operations</i>
Introduction to the world of startup operations. Basic understanding of Startups. Key characteristics and the importance of efficient operations.
<i>Module: Technology Entrepreneurship and Innovation</i>
Generating and evaluating technology-driven business ideas . Systematic approach to technology entrepreneurship. Learning to match customer needs with technology solutions. Aligning business and operating models.
<i>Module: Building and Managing Teams</i>
Exploring aspects of assembling the right team for your startup. Understanding how to select key players to drive your venture forward.
<i>Module: Legal and Ethical Considerations</i>
Addressing the legal aspects of starting and operating a business. Role of lawyers in starting a business. Discussing IP, business structures, and legal obligations. Diving into startup ethics, especially in frontier technologies. Learning about the various contracts needed to run a business. In-depth IP protection, including trademarks and copyright.
<i>Module: Business Models and Marketing</i>
Choosing the right business model for your startup. Creating a marketing plan. Understanding customer acquisition, demand generation and pricing strategies. Developing executive summaries, pitch decks, and business plans. Understanding the art of pitching to attract investors and stakeholders.
<i>Module: Scaling Up</i>
Operational aspects of scaling a startup. Creating a culture, recruiting key personnel, and effective scaling strategies. Discussing competitor-based strategies, stakeholder analysis, and financial concepts.

### Section 3: Negotiating and Establishing IP and Data Rights in Agreement with Startup Businesses

In response to identifying curricula that include “innovative approaches to negotiating and establishing intellectual property and data rights in agreements with startup businesses for the procurement of software and software-embedded systems,” given the lack of resources directly related to software and software embedded systems several relevant courses have been identified in tangential areas.<sup>5</sup>

The resources identified offer a comprehensive understanding of IP and its applications in various industries. These resources can equip students with the knowledge and skills necessary to navigate the complex landscape of IP rights in the context of startup businesses. A

<sup>5</sup> <https://www.coursera.org/search?query=intellectual+property+law&page=3>.

comprehensive foundation for understanding and navigating the complex world of IP and its relevance to startup business agreements would consider the following.

Introduction to IP to provide a fundamental understanding of IP and its value in the tech world. A discussion and knowledge of patents, copyrights, and trademarks as the primary forms of IP protection in the United States. It also explores the economic impact of IP and the policy reasons behind its protection, which is crucial for negotiating IP agreements. Intellectual Property Law offers a comprehensive understanding of various forms of IP rights, including patents, copyrights, and trademarks. The modules in this course will help students develop a solid foundation for understanding IP strategies tailored to an organization's core business goals.

Protecting Business Innovations via:

Trademarks: Understand trademarks' role in protecting brands and creative innovations. Illustrate the challenges of trademark violations globally, making it relevant to startups procuring software and software-embedded systems. This course provides insights into how to protect and negotiate over trademarks.

Copyrights: Explores the world of copyrights and how they can protect creative works, including software. It also covers limitations and software protection, making it applicable to startups in the software industry.

Patents: Describe the importance of patents in protecting innovations and explore various patent-related topics, including patent trolls and software patents, which are directly relevant to software-embedded systems procurement agreements.

In addition to these areas, students (relevant government officials) must understand the limitations and challenges of negotiating and establishing IP and data rights in agreements with startup businesses to procure software and software-embedded systems (i.e., a new course on this topic is needed). Analogies to the biotechnology sector can be helpful as IP rights in this industry allow companies to establish ownership and protect their products from competitors. Startups may own patents or copyrights related to their software innovations, giving them exclusive rights to market and use. This exclusivity can be a significant driver of value for these companies. However, just as in biotechnology, there can be controversies over the strict enforcement of these protections. Some argue that broader information sharing could reduce prices and increase access to technology, especially for startups and smaller businesses. Balancing the need to protect IP with the desire to encourage innovation and market competition is a central challenge in the tech industry. Therefore, understanding IP rights and their implications is vital for negotiating successful agreements with startup businesses in the software sector.

### 3.1 Exhibits

#### SAMPLE ACADEMIC TEXTBOOK RESOURCES

The following books cover various aspects of IP and data rights, each providing unique perspectives and insights that could aid in understanding innovative approaches to negotiating and establishing these rights in agreements with startup businesses:

1. *"The Tech Contracts Handbook: Cloud Computing Agreements, Software Licenses, and Other IT Contracts for Lawyers and Businesspeople"* by David W. Tollen. This book provides practical insights and guidance for negotiating technology-related contracts, including software licenses and cloud computing agreements. It can help understand the nuances of deals for tech services and products for startup businesses.

2. *"Patent It Yourself"* by David Pressman. This book offers a comprehensive guide on understanding and preparing a patent application. It can aid in negotiating and establishing patent rights, especially for tech-based startups.
3. *"Information Doesn't Want to Be Free: Laws for the Internet Age"* by Cory Doctorow. This book discusses ways to navigate copyright, patents, and open-source licensing—vital for startups dealing with software rights.
4. *"The Business of Intellectual Property"* by Kevin Rivette and David Kline. This book explores the business aspect of IP, emphasizing how companies can create value from their IP assets.

### SAMPLE UNIVERSITY-BASED ONLINE COURSES

Like Section 2.1.2, the review of online offerings identified over 29 courses related to a search on “intellectual property and data rights in agreements with startup businesses.”

The following sample is informative about the findings:

“Protecting Business Innovations via Trademark” and “Protecting Business Innovations via Copyright” delve into specific facets of IP. They discuss trademark and copyright laws, their global challenges, infringement defenses, and the protection of software innovations. These modules offer a more targeted exploration of safeguarding unique business creations and brands, which is crucial for establishing favorable agreements when procuring software and systems from startups. The examples presented in these courses, such as trademark violation challenges in e-commerce and protecting software innovations, directly correlate with the need to negotiate IP rights effectively with startups.

“Introduction to Intellectual Property” offers foundational knowledge, delving into the value of intangible assets, the types of U.S. IP, and case studies demonstrating how businesses leverage these assets for substantial value. This course includes discussing alternatives to IP law, shedding light on its evolution to meet changing societal needs. It also investigates IP rights’ economic justifications and philosophical underpinnings, aligning with establishing innovative approaches in negotiating IP and data rights with startups.

Of particular importance is the curriculum available at the Hong Kong University of Science and Technology.<sup>6</sup> This curriculum encompasses a focus on safeguarding software innovations, a niche within copyright law. This segment explores how companies protect their software innovations through practical case studies, such as those involving video games and Virtual Reality software. Additionally, it provides insight into the Digital Millennium Copyright Act (DMCA) of 1998, a U.S. law with global implications, shedding light on its influence on companies worldwide as they navigate the intricate landscape of software and the DMCA.<sup>7</sup>

### 3.2 Proposed Curriculum Elements on IP and Data Rights

These diverse learning materials and training initiatives mark an initial step towards crafting a curriculum that aligns with the stipulations outlined in Sec. 834(a)(1–2) specifically related to software and software-embedded systems. The following modules are tailored for a broader

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<sup>6</sup> <https://www.coursera.org/learn/protect-business-innovations-copyright>.

<sup>7</sup> See [The Digital Millennium Copyright Act of 1998](#) and [PLAW-105publ304.pdf \(congress.gov\)](#).

audience providing a comprehensive overview of innovative approaches to negotiating and establishing IP and data rights in agreements with startup businesses.

**IP AND DATA RIGHTS**

Finally, Table 3 lists key curriculum elements on startup operations, derived from the amalgamation across the resources reviewed.

**Table 3. Key Curriculum Elements on IP and Data Rights.**

<b>Negotiating IP and Data Rights in Startup Agreements</b>
<b>Introduction: Define IP, Patents, Copyrights and Trademarks</b>
Module: Introduction to IP and Data Rights
Define IP and Data Rights. Relevant legal frameworks. Provide Real-world examples of IP disputes.
Module: Legal Foundations and Agreements
Patent, copyright, and trademark basics. Sample IP and data agreements. Negotiation tactics for IP and data rights. Guest Speaker: IP attorney or industry expert.
Module: Data Privacy and Security
Data privacy regulations. Data breaches and their consequences. Privacy policy samples.
Module: Public Policy and Emerging Trends
Current public policy debates in IP and data. Ethical challenges in IP negotiation. IP and data rights on a global scale. International IP disputes and international treaties.
Module: Strategies for IP and Data Rights with Emerging Technologies
AI, blockchain, and IP/data considerations. Technology Licensing and Commercialization. Software innovations Copyright. Discuss Digital Millennium Copyright Act.

**Section 4: Conclusion**

The comprehensive exploration and analysis of curricula outlined in this report align with the mandates outlined in Section 834, which mandates that the Director of AIRC provide recommendations on curricula for the acquisition workforce related to financing and operations of startup businesses. This report integrates a wide range of courses and information, identifying the range of key elements in curricula on these topics.

Given this review, we found that the Defense Acquisition University’s (DAU’s) existing curricula—such as the ACQ315 Understanding Industry course and CON7210 Better Business Deals – Focus on the Private Sector—provides insights into privately owned firms, current or prospective, operating in support of our national defense needs may serve as a foundation for startup finance, operations, and IP. Also, DAU’s ongoing Flexible Acquisition Practices Web Series and the Results Accelerator Investigations contribute additional perspectives, bringing the startup and tech incubator point of view to government program managers and exploring ways to enhance business acumen in government-industry transactions.

The existing curriculum at the DAU, leveraged with the curricula proposed in sections 2.2 and 3.2 above, covers various dimensions of startup financing, operations, and IP/data rights negotiations. Together, they address business acumen, strategic thinking, and leadership competencies crucial for navigating the complexities of startup engagements that can harness DAU's collective knowledge and expertise to address the multifaceted aspects of startup financing, operations, and IP considerations. This collaborative effort will enhance the acquisition workforce's capabilities and contribute to the overarching goal of fostering innovation within the government procurement landscape.

However, we did not assess the approaches, depth, and accessibility of DAU's courses relative to other DoD and extramural courses and content—nor did we categorize whether DAU's courses are design for basic background literacy or for deep preparation of specialists. Also, we did not assess the minimum level of literacy in startup business financing, operations, and IP that any or all members of the defense acquisition workforce should have, nor did we assess who needs deeper or more advanced levels of training. Finally, as discussed above, these results are based on reviews of online information on curricula, textbooks, and other resources rather than consultations with domain experts in the DoD, academia, or industry on these topics. These could be next steps in assessing and making more-specific training recommendations related to startup businesses.

Next steps for DAU would include holding an interchange meeting for DAU Center Directors to become familiar with the module recommendations and highest potential learning assets from AIRC's comprehensive research. DAU should review the recommendations for incorporation into the academic and mission assistance portfolios, and determine if follow-on support from AIRC would be necessary in FY 2025.

## Appendix A. Resources List

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### Academic resources

#### TEXTBOOKS

1. *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, by Eric Ries - Introduces the concepts of Lean Startup methodology and covers principles like validated learning, build-measure-learn, and the minimum viable product (MVP).
2. *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, by Alexander Osterwalder and Yves Pigneur - Introduces the Business Model Canvas, a visual tool used to design, describe, and pivot business models. It's a valuable resource for understanding how startups create value.
3. *The Art of Startup Fundraising: Pitching Investors, Negotiating the Deal, and Everything Else Entrepreneurs Need to Know*, by Alejandro Cremades - This book covers topics like venture capital, angel investing, and the art of pitching to investors.
4. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, by Clayton Christensen- Clayton Christensen explores why well-managed companies often fail to innovate. This classic work introduces the concept of disruptive innovation, which is highly relevant to startups.
5. *Zero to One: Notes on Startups, or How to Build the Future*, by Peter Thiel – This book offers unique insights into entrepreneurship. He discusses the importance of developing a proprietary technology or unique approach to gain a competitive edge.
6. *Thinking, Fast and Slow*, by Daniel Kahneman - Although not strictly a business book, Kahneman's exploration of human cognitive biases and decision-making processes is essential for understanding how people respond to new products and business models.
7. *Lean Analytics: Use Data to Build a Better Startup Faster*, by Alistair Croll and Benjamin Yoskovitz - This book is a practical guide to implementing Lean Startup principles through data-driven decision-making. It's a great resource for entrepreneurs looking to apply analytics in their ventures.
8. *The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm*, by Tom Kelley - This book emphasizes the importance of design thinking and innovation in product development.
9. *Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World*, by Bruce Schneier - This book delves into the contemporary challenges of data privacy and surveillance. Understanding these aspects can be crucial when negotiating data rights and privacy in agreements.

10. *Blockchain and the Law: The Rule of Code*, by Primavera De Filippi and Aaron Wright - This book explores the legal implications of blockchain and smart contracts. Understanding the legal ramifications of these technologies is essential for startups negotiating tech-related agreements.

#### **TRADITIONAL UNIVERSITY-BASED COURSES IN GRADUATE PROGRAMS**

Stanford University: <https://www.qsb.stanford.edu/experience/learning/entrepreneurship/courses>

- The Startup Garage: Design
- The Startup Garage: Testing and Launch
- Angel and Venture Capital Financing for Entrepreneurs and Investors
- Entrepreneurship and Venture Capital
- Entrepreneurship and Venture Capital: Partnership for Growth

Stanford University: **Patent Law and Strategy for Innovators and Entrepreneurs**

- Technology Licensing and Commercialization
- Strategic Management of Technology and Innovation in Established Firms
- Strategic Management of Technology and Innovation in Enterprise Software Firms

Stanford University Online: **The Entrepreneur's Tool Kit for Launching a New Venture**

Columbia University: Developing New Business Ventures: From Ideation to Successful Launch (Online)

Columbia University: <https://courses.business.columbia.edu>

- B3702 [Venturing to Change the World](#)
- B5502 [Strategy Formulation](#)
- B8010 [Fundamental Analysis for Investors, Managers and Entrepreneurs](#)

Harvard University: **Technology Entrepreneurship: Lab to Market**

Upon completion the student will understand:

1. A systematic approach to technology entrepreneurship
2. How to generate new use scenarios by matching customer needs with promising technology seeds
3. How to align business and operating models
4. How to evaluate a technology for readiness and market fit
5. How to position opportunities to secure funding

Wharton Business School: **Entrepreneurship Acceleration Program: Scaling Your Business**  
<https://online-execed.wharton.upenn.edu/entrepreneurship>

Module 1: Evidence-Based Entrepreneurship

Learn how to apply the "lean approach": transform a good idea into a successful business venture while minimizing risk

Module 2: Building the Right Team

Learn how to select founding members, employees, managers, and other key players on your team

Module 3: Lawyers, Advisors, and Mentors

Learn how to use innovation and networking to drive your enterprise forward

Module 4: Business Models and Customer Lifetime Value

Learn how to choose the right business model for your venture

Module 5: Customer Acquisition and Demand Generation

Learn how to find markets and create demand for your product

Module 6: Pricing and Distribution Strategies

Learn how to apply cost structures and pricing mechanisms to your business and use performance measurement tools effectively

Module 7: Gearing Up for Scale

Learn to recruit people who will build your company's culture and use it to scale up your venture

Module 8: Financing: Funding and Valuation

Learn the various sources of financing available for your business

Module 9: Financing: Venture Capital vs. Alternative Funding Channels

Learn how to make a wise decision about venture capital or alternative funding and how to estimate a breakeven point

Module 10: Elements of the Pitch

Create executive summaries and pitch decks for your business and understand how the exit of founding shareholders affects liquidity

Module 11: Business Plan Competition

Participate in a business plan competition with your peers and create a pitch for your own venture. The winner of the competition and the runner-up will win a substantial cash prize to use for seed funding (rules and restrictions apply).

University of Washington: **Fundamentals for Startups**

A lecture series that welcomes individuals interested in delving into the nuances of entrepreneurship and the establishment of startups. From discussions on raising capital to insights into scaling and exit strategies, these presentations feature experienced entrepreneurs, investors, and industry experts. Attendees have the opportunity to gain valuable information and perspectives related to startups. These sessions occur weekly during the academic year over the lunch hour, catering to the University of Washington community and extending an open invitation to the general public.

Monash University Australia: **Startup fundamentals: From setting up to securing investment**

On successful completion of this unit, the student should be able to:

1. Understand and identify the basic IP needs and requirements for a startup including, trademarks, copyrights, and inventions, as well as understand how to protect IP
2. Have a sound overview of the various business structures available to entrepreneurs and the uses of different structures for different types of businesses
3. Understand the legal obligations of business founders, directors, and shareholders
4. Understand the ethical aspects of the legal issues that are relevant to entrepreneurial activities and startups, especially in frontier technologies like robotics, AI, cyber security, and blockchain
5. Understand and identify the fundamental contracts needed to start and grow a business, including founders' agreements, client contracts, privacy considerations and online transactions
6. Understand how to fund a startup including private investment, venture capital and government grants
7. Understand the role of lawyers in starting a business and how an entrepreneur can maximize legal value from a lawyer.

IT University of Copenhagen Denmark: **Business and Startup Foundations** (Summer University)

On successful completion of this unit the student should be able to:

1. Describe different perspectives on business strategy
2. Relate different competitor-based strategies to different situations
3. Perform a stakeholder analysis
4. Create a simple marketing plan
5. Describe and apply common external and internal financial concepts (e.g., EBIT, P/E)
6. Critically analyze and implement both qualitative and quantitative data for startup development

## Industry Resources

### BLOGS:

<https://www.alexosterwalder.com>

<https://neilpatel.com/blog/>

<https://guykawasaki.com/blog/>

### INVESTOPEDIA:

Please see the attached zip folder (labeled WRT-1081.16\_Appx A\_Investopedia Files).

### **Online Courses and Programs:**

University-based Coursera: over 210 courses reviewed for financing and operations and IP and data rights. Please see the accompanying Excel data file (labeled WRT-1081.16\_Appx A\_StartupCourses).