

DoD Financial Management Certificate with Data Analytics JAN 2025

(Distance Learning – Curriculum #196)

Program Overview

The DoD Financial Management Certificate educates mid-career defense financial managers in accounting, budgeting, financial management, and data analytics. The curriculum meets most of the educational requirements for the Defense FM Certification Level 3. Students complete one course in each of the five consecutive academic quarters. Instruction delivered synchronously online with live interaction between the professor and students.

Program goals:

- Support continuous financial management reform initiatives mandated by Congress and senior leaders.
- Assist the DoD's decision-making processes at all levels by providing accurate, timely, and relevant information and analysis.

Students will learn to:

- Apply critical and strategic thinking to formulate and solve real-world problems, and understand DoD senior-level decision-making processes under uncertainty.
- Analyze data to solve complex and unstructured management problems faced by the DoD in accordance with an efficient procurement of resources and the effective accomplishment of the overall DoD objectives.
- Understand DoD's PPBE system and the overarching federal budget and regulatory systems in which it operates.
- Use rigorous economic and financial techniques to solve long-term DoD financial problems that involve identifying, analyzing, and selecting among different alternatives.
- Apply analytical techniques and tools to evaluate data and models in order to predict outcomes, understand systems, prescribe policy changes, and measure the impact of resource management decisions.
- Understand regulatory mandates and ethical challenges faced by the DoD in audit and how to apply audit techniques that enforce sound internal accounting and administrative controls.

- Apply fundamental accounting concepts and methods to analyze federal and corporate accounting and costing information, including the use of metrics to evaluate and reward performance.

Students earn this certificate upon completing five graduate-level courses: three financial management core courses and two courses in data analytics.

Financial Management Courses (3):

1. MN3156 - Financial and Managerial Accounting (4-0)

This course is designed as a first course in business financial management for graduate students. The course covers a range of topics in financial accounting, managerial accounting and business finance. All topics covered share a common theme in that they are related to the creation and use of financial models and information. The course requires critical thinking and the ability to analyze and apply financial models and reasoning in the context of case studies. The course is divided into two broad areas: Financial Information and Financial Management. Within these areas, specific topics include: financial accounting, financial reports, financial analysis, capital structure, costing systems, performance measurement and control, and investment analysis.

2. MN4053 - Defense Budget and Financial Management Policy (4-0)

This course analyzes the resource requirements process within the Department of Defense (DoD) and in the executive and legislative branches of the U.S. federal government. It begins with a summary of the current threat situation and potential changes to it. Once the threat is defined, the study of the resource allocation process to meet the threat begins. The course covers the resource planning and budgeting processes of the Department of the Navy, DoD and the federal government. It includes the politics of executive and congressional budgeting, and DoD budget and financial management processes and procedures including budget formulation and execution. It also includes analysis of the Planning, Programming, Budgeting and Execution system (PPBES) used by DoD to plan, budget and implement national defense resource management policy and programs. Other areas included are budget process and fiscal policy reform and the dynamics of internal DoD competition for resources. Executive and congressional budget processes are assessed to indicate how national security policy is resourced and implemented through the budget process. Spending for national security policy is tracked from budget submission through resolution, authorization and appropriation. Budget formulation, negotiation, and execution strategies are evaluated to indicate the dynamics of executive-legislative competition over resource allocation priorities. Supplemental appropriation patterns and current year budget execution patterns and problems are also considered.

3. MN4510 - Strategic Resource Management (4-0)

The objective of this course is to integrate business analysis, financial analysis, and strategic analysis in solving complex management problems involving the allocation of scarce resources to achieve overall organization objectives. Resources here are not limited to financial resources but also include human and physical resources. The course will make use of a wide variety of management tools such as value chain analysis, competitive strategy, market positioning, supply chain management, activity analysis, target costing, cost of quality, and business process improvement techniques.

OR

MN4052 - Managerial Finance (3-0)

Study of capital budgeting techniques. This course provides an overview of the basic concepts and principles of financial management in the private sector and its implications on government contracting. It is designed to provide insights into the financial decision-making process encountered by commercial enterprises. The major emphasis is on financial environment, risk and return analysis, valuation models, cost of capital determination, optimal capital structure, and short-term and long-term financing.

Data Analytics Courses (2):

1. MN3911 - Introduction to Data Analytics for Defense Management (3-0)

This course introduces students to foundational techniques for preparing and analyzing data. Each week, students will learn one or more concepts, and then apply acquired skills in a structured learning exercise. Topics include: pivot tables, visualization, data storage and retrieval, computer programming, summary statistics, and an introduction to probability and probability distributions.

2. MN4912 - Multivariate Data Analysis (3-0)

This course introduces concepts and skills that are necessary to use data for inference, prediction, and to identify causal relationships. Students will build on skills and analytic techniques which were introduced in MN3911 and they will use real-world DoD data and managerially relevant examples. Topics include linear and logistic regression, sampling distributions, estimation, prediction and hypothesis testing and study design.

Prerequisites: MN3911 or approval by the Course Coordinator or Instructor.