

Certified Futures & Options Analyst (CFOA)

Official Curriculum Document

International Council for Derivatives Trading (ICFDT)

The CFOA Curriculum

The Certified Futures & Options Analyst (CFOA) designation is awarded by the International Council for Derivatives Trading (ICFDT) to individuals who demonstrate a comprehensive understanding of modern derivatives markets, including options, futures, volatility, trading strategies, and risk management practices.

The CFOA curriculum is built on a structured progression of conceptual foundations, analytical tools, and practical frameworks. It reflects the knowledge expected of derivatives professionals operating in today's global markets, where liquidity, electronic execution, complex volatility structures, and evolving regulatory environments define the trading landscape.

This document outlines the **official curriculum** for the CFOA examination. It provides a chapter-by-chapter overview of the required academic content. It does **not** replace the CFOA textbook or study materials, but serves as the authoritative reference for candidates, employers, training providers, and academic institutions.

The CFOA Program emphasizes:

- Technical mastery of derivatives instruments
- Competence in pricing, volatility interpretation, and probabilistic thinking
- Applied understanding of trading strategies across market conditions
- Strong risk-management judgment
- Ethical and compliant participation in global markets

Candidates are expected to understand **all** topics listed in this document at a professional level.

SECTION 1: Financial Derivatives: Past, Present, and Future

This foundational section of the CFOA examination curriculum provides a comprehensive overview of financial derivatives, meticulously detailing their historical origins, charting their evolutionary trajectory, and exploring the pivotal emerging trends that are shaping their future landscape. Candidates are required to demonstrate a profound understanding of this historical and prospective context, as it establishes the essential competencies for comprehending the complexities and intricacies inherent in modern derivatives markets and fulfilling the responsibilities of a certified professional.

Historical Foundations



- Ancient origins of derivative-like agreements in early civilizations
- Forward-style contracts used for agriculture and trade
- Standardization and clearing as the foundation of modern derivatives

Market Evolution



- Evolution of markets toward electronic trading
- Global expansion of derivatives volume and participation
- Technology-driven transformation: automation, HFT, algorithmic execution

Emerging Trends



- Emerging trends: AI, crypto derivatives, ESG-linked derivatives, blockchain
- Regulatory evolution to balance innovation and stability
- Increasing role of emerging markets in global derivatives activity

Modern Risk Management



- Modern risk management relying on analytics, machine learning, stress testing
- Growing need for technical, regulatory, and risk-management skillsets

SECTION 2A: Options: Structure, Pricing, and Volatility

This foundational section of the CFOA examination curriculum rigorously addresses the intricate domain of financial options. Candidates are expected to demonstrate comprehensive proficiency in understanding their fundamental structure, key pricing models, and the critical applications of volatility analysis. Mastery of these concepts is essential for evaluating options behavior, determining fair value, and managing associated risks within professional derivatives markets, thereby affirming the candidate's readiness for advanced financial practice.



Options Fundamentals

- Call and put options: rights, obligations, intrinsic/extrinsic value, moneyness
- American vs European exercise
- Options chains: strikes, expirations, volume, open interest
- Buying vs Selling options



Pricing Models

- Pricing models: Black-Scholes, binomial, key input sensitivities
- Greeks: delta, gamma, theta, vega, rho
- Probability concepts: expected move, standard deviation, probability of profit



Volatility Analysis

- Implied volatility (IV) and historical volatility
- Volatility smiles, skews, and term structures
- IV Rank and IV Percentile
- Event-driven volatility behavior and its impact on pricing

SECTION 2B: Options Trading Strategies

This section is dedicated to the exploration of diverse options trading strategies, encompassing fundamental directional approaches, income-generating vertical spreads, market-neutral constructs, and time-dependent methodologies. It further delves into protective applications, guiding candidates through the selection of optimal strategies based on volatility context and a probabilistic framework, and analyzing the impact of key influencing factors on potential trading outcomes.



Single-Leg Strategies

Single-leg strategies: long/short calls and puts



Vertical Spreads

Vertical debit and credit spreads



Neutral Strategies

Neutral strategies: straddles, strangles, iron condors, iron butterflies



Time-Based Strategies

Time-based strategies: calendar and diagonal spreads



Protective Strategies

Protective strategies: covered calls, collars, protective puts, synthetic stock



Strategy Selection

Using IV context and a probabilistic framework for optimal strategy selection.



Outcome Factors

Analyzing the impact of time decay, volatility, and position structure on trading outcomes.

SECTION 3A: Futures Contracts

This section focuses on an in-depth examination of futures contracts, critical financial instruments enabling the commitment to buy or sell an asset at a predetermined price on a future date. Candidates are expected to demonstrate comprehensive understanding and professional proficiency in their application for both sophisticated hedging strategies, mitigating adverse price movements, and strategic speculative engagements across diverse global markets. Mastery of the concepts presented herein is essential for successful navigation of derivatives markets.

Contract Structure



- Definition and purpose of futures contracts
- Differences between futures and forwards
- Standardized components: quantity, grade, delivery month, delivery location, tick size
- The role of exchanges and clearinghouses
- Asset classes: agricultural, energy, metals, financial futures

Margin & Settlement



- Margin mechanics: initial margin, maintenance margin, margin calls
- Daily mark-to-market and contract value calculations
- Practical contract examples (e.g., crude oil, corn)

Market Dynamics



- Futures curve structure: contango and backwardation
- Hedging with futures (long hedges, short hedges)
- Speculative positioning and leverage

Expiration & Benefits



- Expiration rules: physical delivery, cash settlement
- Offsetting and rollover
- Benefits of standardized futures markets: transparency, liquidity, counterparty stability

SECTION 3B: Futures Trading Strategies

This section rigorously examines advanced futures trading strategies, a cornerstone of professional competency in derivatives markets. Candidates are expected to demonstrate a deep understanding and the practical application of directional, spread, and hedging strategies. Mastery includes the ability to analyze market conditions, construct and manage positions, evaluate risk-reward profiles, and implement risk mitigation techniques, all essential for effective engagement in complex futures trading environments and for success in the examination.



Directional Strategies

- Long and short directional futures exposure
- Evaluating risk-reward profiles



Leverage & Daily Settlement Mechanics

- Understanding the magnified impact of leverage on trading outcomes
- Implementing robust leverage management techniques to control exposure
- Detailed analysis of daily mark-to-market settlement processes
- Consequences of margin calls and strategies for maintaining sufficient margin
- Impact of daily cash flows on trading accounts and overall capital management



Spread Trading

- Spread trading: calendar, inter-commodity, intra-commodity spreads
- Liquidity considerations, contract months, and rollover practices



Hedging Applications

- Hedging price risk across asset classes
- Hedge-ratio principles
- Scenario planning and stress testing

SECTION 4: Risk Management in Futures and Options Trading

This section addresses the critical domain of risk management within futures and options trading, a professional competency indispensable for successful practice in derivatives markets. For the examination, candidates are required to demonstrate a comprehensive understanding and practical mastery of identifying, assessing, and mitigating potential exposures across diverse market conditions. Emphasis is placed on acquiring the robust expertise necessary to implement effective risk control measures, thereby ensuring the stability and integrity of trading operations.



Risk Identification

- Market risk
- Credit/counterparty risk
- Liquidity risk
- Operational risk
- Systemic risk



Risk Tools & Concepts

- Volatility as a core risk metric
- Standard deviation and dispersion analysis
- Stress testing and scenario analysis
- Monitoring correlations and co-movements
- Margin requirements and exposure control



Risk Management Techniques

- Position sizing and exposure limits
- Stop-loss and profit-target discipline
- Hedging with futures
- Hedging with options
- Post-trade evaluation and adjustment



Modern Practices

- Real-time monitoring frameworks
- Analytics-driven risk control
- Machine-learning-enabled scenario tools



Regulatory & Ethical Considerations

- Regulatory structures shaping derivatives markets
- Required compliance behaviors
- Ethical principles in leveraged and derivatives trading

CONCLUSION

The CFOA curriculum represents a comprehensive, modern framework for mastering options, futures, volatility, and risk management. It is designed to ensure candidates can operate confidently and responsibly within global derivatives markets.

- ❏ Candidates preparing for the CFOA Examination must be proficient in **all** topics listed in this document.