**CMT LEVEL I CURRICULUM**

**MARKET: 21%**
- **Theory and History: 9%**
  - History of financial markets (historical market events, bubbles, crashes)
  - History of technical analysis
  - Modern Portfolio Theory
  - Dow theory
  - Behavioral finance
- **Markets: 5%**
  - Historical market data (non-trading days/hours, characteristics of various markets)
  - Traditional asset classes (equities, fixed income, commodities)
  - Alternative asset classes (derivatives, private equity, managed futures, real estate)
  - Currencies
  - Non-US markets
  - Market indices
  - Exchanges
- **Markets Indicators: 7%**
  - Breadth indicators (A/D, up/down, volume)
  - Index construction
  - Government/Fed reports (treasury data, monetary policy, Fed holdings, CPI)
  - Private money flows (mutual fund holdings, corporate liquidity holdings)
  - Sentiment measures (put-call ratio, investor polls)
  - Volatility (VIX, historical, implied)

**CHART DEVELOPMENT & ANALYSIS: 47%**
- **Constructing Charts: 5%**
  - Scaling methods (arithmetic, logarithmic, semi-log)
  - Line charts
  - Bar charts
  - Candlestick charts
  - Point and figure charts
  - Volume
- **Trend Analysis: 16%**
  - Trendlines
  - Regression analysis
  - Moving averages
- **Chart and Pattern Analysis: 23%**
  - Classic pattern recognition
  - Candlestick pattern recognition
  - Elliot Wave principal
  - Fibonacci price analysis
  - Support and resistance
  - Relative strength index (RSI)
  - Moving average convergence/divergence (MACD)
  - Bollinger bands
  - Stochastics
- **Confirmation: 3%**
  - Open interest and volume

**TECHNICAL INVESTMENT STRATEGIES: 18%**
- **Cycles: 5%**
  - Business cycles
- **Selection and Decision: 13%**
  - Relative strength
  - Forecasting techniques (pattern and trend recognition)

**SYSTEM TESTING: 5%**
- **System Testing: 5%**
  - Backtesting
  - Order execution and slippage

**STATISTICAL ANALYSIS: 6%**
- **Statistical Analysis: 6%**
  - Descriptive statistics (mean, median, mode)
  - Fundamentals of probability

**ETHICS AND STANDARDS OF PRACTICE: 3%**
MARKET: 13%
  Theory and History: 5%
    Behavioral finance
    Adaptive Market Hypothesis
  Market Indicators: 8%
    Breadth indicators (A/D, up/down volume)
    Index construction
    Sentiment measures (put-call ratio, investor polls)
    Volatility (VIX, historical, implied)

CHART DEVELOPMENT & ANALYSIS: 39%
  Constructing Charts: 3%
    Volume
  Trend Analysis: 15%
    Trendlines
    Multiple time frame analysis
    Breakouts (from channels or chart patterns)
    Moving averages
    Trend strength indicators (DMI, ADX, etc.)
  Chart and Pattern Analysis: 15%
    Gap analysis
    Support and resistance
    Confirmation: 6%
      Oscillators and divergence
      Sector rotation
      Intermarket signals

TECHNICAL INVESTMENT STRATEGIES: 13%
  Cycles: 3%
    Seasonal cycle
  Selection and Decision: 10%
    Non-correlated assets
    Relative strength
    Forecasting technique (pattern and trend recognition)

RISK MANAGEMENT: 15%
  Risk Management: 15%
    Absolute and relative risk (total risk v. risk compared to benchmark)
    Risk modeling
    Value at risk
    Volatility risk
    Liquidity risk
    Diversification
    Stops v. hedging
    Leverage risk
    Portfolio risk management (market neutral, hedging strategies)
    Measures of risk (maximum cumulative drawdown, net profit to drawdown, maximum
    consecutive losses, largest losses, longest flat time, time to recovery, maximum
    favorable and adverse excursions)
    Risk-based performance measures

SYSTEM TESTING: 10%
  System Testing
    Algorithmic development
    Optimizing entry and exit rules
    Equity curve analysis
    Position size rules (Tharp’s methods, Kelly criterion, Optimal f)
    Profit measures (profit factor, outlier-adjusted profit to loss, percentage of winning
    trades, annualized rate of return, payoff ratio, length of average winning trade,
    efficiency factor)

STATISTICAL ANALYSIS: 7%
  Statistical Analysis
    Inferential statistics (correlation, regression, t-test)

ETHICS AND STANDARDS OF PRACTICE: 3%

Technical analysis provides a framework for informing investment management decisions by applying a supply
and demand methodology to market prices. Technical analysts employ a disciplined, systematic approach that
seeks to minimize the impact of behavioral biases and emotion from the investment practice.

A tool that compliments other investment disciplines, many institutional analysts, strategists and portfolio
managers fuse technical research with other analytical approaches, such as quantitative, fundamental and
macro-economic methods.

The Chartered Market Technician® (CMT) credential is the preeminent, global designation for practitioners of
technical analysis. The designation is awarded to those who demonstrate mastery of a core body of knowledge
of investment risk in portfolio management settings.

Earning the CMT charter makes you part of a community of investment professionals recognized as specialists
and value generators around the world. A perfect complement to other analytical disciplines and financial
designations, the CMT charter puts you on the leading edge of the ever-changing investment industry.
**CMT LEVEL III CURRICULUM**

**RISK MANAGEMENT: 21%**

**Risk Management**

Risk management (basics of probability & statistics, modeling risk factors, number of assets and impact on portfolio, managing risk through correlation, VAR, performance and risk metrics, market volatility and fat-tailed distributions, correlation and diversification, managing individual trade risk, managing risk for an entire portfolio)

Position sizing
Quantitative and Statistical analysis
System development and testing

**ASSET RELATIONSHIPS: 18%**

**Asset Relationships**

Intermarket analysis
Relative strength
Sector rotation

**PORTFOLIO MANAGEMENT: 18%**

**Portfolio Management**

Portfolio management (performance measurement, portfolio allocation, asset correlation, asset allocation, alternative investments, risk management with alternatives)

**CLASSICAL METHODS: 21%**

**Classical Methods**

Sentiment
Market breadth
Market forecasting
Price patterns
Volume study and analysis
Candlestick analysis
Oscillators or various technical studies

**BEHAVIORAL FINANCE: 10%**

**Behavioral Finance**

Behavioral finance

**VOLATILITY ANALYSIS: 7%**

**Volatility Analysis**

Volatility Analysis

**ETHICS AND STANDARDS OF PRACTICE: 5%**