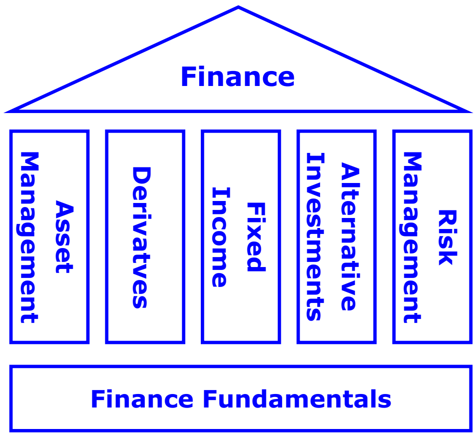
>algofin ag
consulting and research

In-House Training led by
Prof. Dr. Manuel Ammann
University of St. Gallen

In-House Training in Finance

Content

We offer executive teaching and training in the following areas of finance: **Asset Management**, **Derivatives**, **Fixed Income**, **Risk Management**, and **Alternative Investments**. The modular structure of the courses allows us to tailor the design and content of our in-house training and best meet your needs.



In this brochure, we provide a description of offered modules, including PC sessions. An in-house training course can be chosen either by selecting a predefined course from our **menu** (page 2) or by assembling single modules **à la carte** (page 3).

Audience

Our courses are intended for professionals in banking, insurance, asset management, pension funds, and other financial institutions.

Language

Courses can be taught in English or in German, depending on your preferences.

Duration

Each module is scheduled for 1.5 hours. The duration of the training is flexible and dependents on your needs. For instance, courses can be taught during evenings or blocked in one or more days.

Menu of Courses

Finance Today (15 sessions) ☐

- Risk and Return (A1)
- Portfolio theory (A2)
- CAPM (A3)
- Corporate Valuation (A4)
- Strategic Asset Allocation (A5)
- Tactical Asset Allocation (A6)
- Performance Measurement (A8)
- Behavioral Finance (A10)
- Derivative Instruments (B1)
- Application of Derivatives (B2)
- Structured Products (B5)
- Fixed Income Instruments (C1)
- Credit Risk (C3)
- Fundamentals of Alternative Investments (D9)
- Value at Risk (E1)

Fundamentals of Finance Today (5 sessions) ☐

- Fundamentals of Asset Management (A14)
- Fundamentals of Derivatives (B10)
- Fundamentals of Fixed Income (C5)
- Fundamentals of Alternative Investment (D9)
- Fundamentals of Risk Management (E8)

Asset Management Today (10 sessions) ☐

- Risk and Return (A1)
- Portfolio Theory (A2)
- CAPM (A3)
- Corporate Valuation (A4)
- Strategic Asset Allocation (A5)
- Tactical Asset Allocation (A6)
- International Portfolio Allocation (A7)
- Management of Bond Portfolios (C2)
- Performance Measurement (A8)
- Life-Cycle Investing (A9)

Derivatives Today (6 sessions) ☐

- Derivative Instruments (B1)
- Application of Derivatives (B2)
- Option Pricing (B3)
- Convertible Securities (B4)
- Structured Products (B5)
- Risk Management of Derivative Securities (E5)

Alternative Investments Today (8 sessions) ☐

- Arbitrage and Relative Value Strategies (D1)
- Event-Driven and Directional Strategies (D2)
- Asset Allocation and Fund Selection (D3)
- Performance Measurement of Hedge Funds (D4)
- Funds of Hedge Funds (D5)
- Commodity Investments (D6)
- Real Estate Investments (D7)
- Private Equity and Venture Capital (D8)

Modules à la Carte

Asset Management

A1	Risk and Return		☐
A2	Portfolio Theory		☐
A3	CAPM		☐
A4	Corporate Valuation		☐
A5	Strategic Asset Allocation		☐
A6	Tactical Asset Allocation		☐
A7	International Portfolio Allocation		☐
A8	Performance Measurement		☐
A9	Life-Cycle Investing		☐
A10	Behavioral Finance		☐
A11	Factor Models	(Advanced)	☐
A12	Portfolio Theory in Excel	(PC session)	☐
A13	Corporate Valuation in Excel	(PC session)	☐
A14	Fundamentals of Asset Management		☐

Derivatives

B1	Derivative Instruments		☐
B2	Application of Derivatives		☐
B3	Option Pricing		☐
B4	Convertible Securities		☐
B5	Structured Products		☐
B6	Advanced Option Pricing	(Advanced)	☐
B7	Numerical Option Pricing	(Advanced)	☐
B8	Derivatives in Excel	(PC session)	☐
B9	Interest Rate Derivatives in Excel	(PC session)	☐
B10	Fundamentals of Derivatives		☐

Fixed Income

C1	Fixed Income Instruments		☐
C2	Management of Bond Portfolios		☐
C3	Credit Risk		☐
C4	Term Structure Models	(Advanced)	☐
C5	Fundamentals of Fixed Income		☐

Alternative Investments

D1	Arbitrage and Relative Value Strategies		☐
D2	Event-Driven and Directional Strategies		☐
D3	Asset Allocation and Fund Selection		☐
D4	Performance Measurement of Hedge Funds		☐
D5	Funds of Hedge Funds		☐
D6	Commodity Investments		☐
D7	Real Estate Investments		☐
D8	Private Equity and Venture Capital		☐
D9	Fundamentals of Alternative Investments		☐

Risk Management

E1	Value at Risk		☐
E2	Fixed Income Risk Management		☐
E3	Currency Risk Management		☐
E4	Asset and Liability Management		☐
E5	Risk Management of Derivative Securities		☐
E6	Value at Risk in Excel	(PC session)	☐
E7	Asset and Liability Management in Excel	(PC session)	☐
E8	Fundamentals of Risk Management		☐

Modules and Content

Asset Management

Code	*Title*	*Description*
A1	Risk and Return	Simple and continuous compounding, measuring risk, portfolio aggregation, time aggregation
A2	Portfolio Theory	Diversification, portfolio optimization a la Markowitz, Tobin separation
A3	CAPM	Beta, market portfolio, systematic and non-systematic risks
A4	Corporate Valuation	Discounted cash flows, Gordon growth model, price/earning ratios, price/book ratios, price/sales ratios, corporate valuation and acquisitions
A5	Strategic Asset Allocation	Active vs. passive portfolio management, tracking error, core-satellite approach, reverse optimization
A6	Tactical Asset Allocation	Black-Litterman approach, market timing, sector rotation, business cycles, factor models
A7	International Portfolio Allocation	Currency risk, currency overlay, home bias, country rotation, emerging markets
A8	Performance Measurement	Benchmarks, alpha generation, performance attribution, Sharpe ratio, Treynor ratio Information criteria, style analysis
A9	Life-Cycle Investing	Time horizon effects, asset and liability management, pension planning
A10	Behavioral Finance	Efficient markets and limits of arbitrage, empirical anomalies, psychological theories of financial markets
A11	Factor Models	APT, loadings, risk premia
A12	Portfolio Theory in Excel (PC session)	Determining the optimal portfolio, implementing the CAPM, calculating performance measures
A13	Corporate Valuation in Excel (PC session)	Discounted cash-flow valuation, calculating multiples
A14	Fundamentals of Asset Management	Risk and return, portfolio theory, CAPM

Derivatives

Code	*Title*	*Description*
B1	Derivative Instruments	Futures/forwards, options, payoff diagrams and applications
B2	Application of Derivatives	Hedging, portfolio insurance
B3	Option Pricing	Valuation by arbitrage, binomial model, Black Scholes
B4	Convertible Securities	Convertible, exchangeables, call behavior, forced conversion, pricing, empirical anomalies
B5	Structured Products	Portfolio insurance, valuation and application of structured products, new trends
B6	Advanced Option Pricing (Advanced)	Stochastic processes, Martingales, and risk-neutral valuation, Radon-Nikodym derivative, Ito's lemma, probability measures and transformation, Girsanov's theorem, analytical pricing of options (Black-Scholes model)
B7	Numerical Option Pricing (Advanced)	Efficient programming of Cox, Ross, Rubinstein trees, simulation methods, pricing American-style options by simulation
B8	Derivatives in Excel (PC session)	Black Scholes model, greeks, binomial model
B9	Interest Rate Derivatives in Excel (PC session)	Ho Lee, Vasicek, CIR, and Hull White model, Hull White model and trinomial trees, valuation of bond options and swaptions by trees
B10	Fundamentals of Derivatives	Instruments, arbitrage free pricing, applications

Fixed Income

Code	*Title*	*Description*
C1	Fixed Income Instruments	Bonds and floating rate notes, yield to maturity, forward rates, riding the yield curve
C2	Management of Bond Portfolios	Interest rate risk and duration, credit spreads, ratings, bondindexing vs. active management of bond portfolios
C3	Credit Risk	Default probabilities, ratings, migration matrices, credit value at risk, economic capital
C4	Term Structure Models (Advanced)	Equilibrium models vs. no-arbitrage models, short rate models vs. forward rate models, factor models
C5	Fundamentals of Fixed Income	Instruments, interest rate risk, management of bond portfolios

Alternative Investments

Code	Title	Description
D1	Arbitrage and Relative Value Strategies	Leverage and long/short, market neutral, equity market strategies, fixed income arbitrage, convertible arbitrage
D2	Event-Driven and Directional Strategies	Distressed securities, merger/risk arbitrage, global macro, emerging markets, the 'LTCM' case
D3	Asset Allocation and Fund Selection	Optimal allocation, portfolio construction, risk management, due diligence, fees
D4	Performance Measurement of Hedge Funds	Alpha, risk and return measurement, benchmarking and risk adjustment, survivorship bias and backfilling
D5	Funds of Hedge Funds	Market overview and products, diversification, risk and performance, cost and transparency
D6	Commodity Investments	Investing in precious metals, energy investments, investing in agricultural products, managed futures, GSCI
D7	Real Estate Investments	Investment vehicles, risk and return characteristics, investment strategies
D8	Private Equity and Venture Capital	Selection of target company, participation forms, investment process, exit strategies
D9	Fundamentals of Alternative Investments	Risk and return profiles, hedge funds, commodity investments, private equity

Risk Management

Code	Title	Description
E1	Value at Risk	Historical simulation, delta-normal method, Monte Carlo simulation, stress testing and backtesting
E2	Fixed Income Risk Management	Duration and convexity, bond portfolios and key rate duration, VaR for bond portfolios
E3	Currency Risk Management	Currency overlays, currency options, forwards and futures, currency swaps
E4	Asset and Liability Management	Balance sheets and interest rate risk, duration gap, interest rate scenarios
E5	Risk Management of Derivative Securities	Historical method, delta-normal method, risk reduction, value at risk for bond portfolios
E6	Value at Risk in Excel (PC session)	Historical method, delta-normal method, risk reduction, value at risk for bond portfolios
E7	Asset and Liability Management in Excel (PC session)	Balance sheets and interest rate risk, duration gap, interest rate scenarios
E8	Fundamentals of Risk Management	VaR, interest rate risk, asset und liability management