

CFA® LEVEL III
CURRICULUM
2019 vs 2020

2019	2020
Ethical and Professional Standards (1)	Ethical and Professional Standards (1)
Study Session 1	Study Session 1
READING 1. CODE OF ETHICS AND STANDARDS OF PROFESSIONAL CONDUCT	READING 1. CODE OF ETHICS AND STANDARDS OF PROFESSIONAL CONDUCT
<ul style="list-style-type: none"> a. describe the structure of the CFA Institute Professional Conduct Program and the disciplinary review process for the enforcement of the CFA Institute Code of Ethics and Standards of Professional Conduct; b. explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each standard. 	<ul style="list-style-type: none"> a. describe the structure of the CFA Institute Professional Conduct Program and the disciplinary review process for the enforcement of the CFA Institute Code of Ethics and Standards of Professional Conduct; b. explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each standard.
READING 2. GUIDANCE FOR STANDARDS I–VII	READING 2. GUIDANCE FOR STANDARDS I–VII
<ul style="list-style-type: none"> a. demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by interpreting the Code and Standards in various situations involving issues of professional integrity; b. recommend practices and procedures designed to prevent violations of the Code and Standards. 	<ul style="list-style-type: none"> a. demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by interpreting the Code and Standards in various situations involving issues of professional integrity; b. recommend practices and procedures designed to prevent violations of the Code and Standards.
	READING 3. APPLICATION OF THE CODE AND STANDARDS: LEVEL III
	<ul style="list-style-type: none"> a. evaluate practices, policies, and conduct relative to the CFA Institute Code of Ethics and Standards of Professional Conduct; b. explain how the practices, policies, or conduct does or does not violate the CFA Institute Code of Ethics and Standards of Professional Conduct.

2019	2020
Ethical and Professional Standards (2)	Ethical and Professional Standards (2)
Study Session 2	Study Session 2
READING 3. APPLICATION OF THE CODE AND STANDARDS	
<ul style="list-style-type: none"> a. evaluate professional conduct and formulate an appropriate response to actions that violate the CFA Institute Code of Ethics and Standards of Professional Conduct; b. formulate appropriate policy and procedural changes needed to assure compliance with the Code and Standards. 	
The Asset Management Industry and Professionalism	
Study Session 3	
READING 6. PROFESSIONALISM IN INVESTMENT MANAGEMENT	READING 4. PROFESSIONALISM IN THE INVESTMENT INDUSTRY
<ul style="list-style-type: none"> a. describe professions and how they establish trust; b. explain professionalism in investment management; c. describe expectations of and challenges for investment management professionals. 	<ul style="list-style-type: none"> a. describe how professions establish trust; b. explain professionalism in investment management; c. describe expectations of investment professionals; d. describe a framework for ethical decision-making.
Ethical and Professional Standards (2)	
Study Session 2	
READING 4. ASSET MANAGER CODE OF PROFESSIONAL CONDUCT	READING 5. ASSET MANAGER CODE OF PROFESSIONAL CONDUCT
<ul style="list-style-type: none"> a. explain the purpose of the Asset Manager Code and the benefits that may accrue to a firm that adopts the Code; b. explain the ethical and professional responsibilities required by the six General Principles of Conduct of the Asset Manager Code; c. determine whether an asset manager's practices and procedures are consistent with the Asset Manager Code; d. recommend practices and procedures designed to prevent violations of the Asset Manager Code. 	<ul style="list-style-type: none"> a. explain the purpose of the Asset Manager Code and the benefits that may accrue to a firm that adopts the Code; b. explain the ethical and professional responsibilities required by the six General Principles of Conduct of the Asset Manager Code; c. determine whether an asset manager's practices and procedures are consistent with the Asset Manager Code; d. recommend practices and procedures designed to prevent violations of the Asset Manager Code

2019	2020
Performance Evaluation	Ethical and Professional Standards (2)
Study Session 19	Study Session 2
READING 37. OVERVIEW OF THE GLOBAL INVESTMENT PERFORMANCE STANDARDS	READING 6. OVERVIEW OF THE GLOBAL INVESTMENT PERFORMANCE STANDARDS
<ul style="list-style-type: none"> a. discuss the objectives, key characteristics, and scope of the GIPS standards and their benefits to prospective clients and investment managers; b. explain the fundamentals of compliance with the GIPS standards, including the definition of the firm and the firm's definition of discretion; c. explain the requirements and recommendations of the GIPS standards with respect to input data, including accounting policies related to valuation and performance measurement; d. discuss the requirements of the GIPS standards with respect to return calculation methodologies, including the treatment of external cash flows, cash and cash equivalents, and expenses and fees; e. explain the requirements and recommendations of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns; f. explain the meaning of "discretionary" in the context of composite construction and, given a description of the relevant facts, determine whether a portfolio is likely to be considered discretionary; g. explain the role of investment mandates, objectives, or strategies in the construction of composites; h. explain the requirements and recommendations of the GIPS standards with respect to composite construction, including switching portfolios among composites, the timing of the inclusion of new portfolios in composites, and the timing of the exclusion of terminated portfolios from composites; i. explain the requirements of the GIPS standards for asset class segments carved out of multi-class portfolios; 	<ul style="list-style-type: none"> a. discuss the objectives, key characteristics, and scope of the GIPS standards and their benefits to prospective clients and investment managers; b. explain the fundamentals of compliance with the GIPS standards, including the definition of the firm and the firm's definition of discretion; c. explain the requirements and recommendations of the GIPS standards with respect to input data, including accounting policies related to valuation and performance measurement; d. discuss the requirements of the GIPS standards with respect to return calculation methodologies, including the treatment of external cash flows, cash and cash equivalents, and expenses and fees; e. explain the requirements and recommendations of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns; f. explain the meaning of "discretionary" in the context of composite construction and, given a description of the relevant facts, determine whether a portfolio is likely to be considered discretionary; g. explain the role of investment mandates, objectives, or strategies in the construction of composites; h. explain the requirements and recommendations of the GIPS standards with respect to composite construction, including switching portfolios among composites, the timing of the inclusion of new portfolios in composites, and the timing of the exclusion of terminated portfolios from composites; i. explain the requirements of the GIPS standards for asset class segments carved out of multi-class portfolios;



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<ul style="list-style-type: none"> j. explain the requirements and recommendations of the GIPS standards with respect to disclosure, including fees, the use of leverage and derivatives, conformity with laws and regulations that conflict with the GIPS standards, and noncompliant performance periods; k. explain the requirements and recommendations of the GIPS standards with respect to presentation and reporting, including the required timeframe of compliant performance periods, annual returns, composite assets, and benchmarks; l. explain the conditions under which the performance of a past firm or affiliation must be linked to or used to represent the historical performance of a new or acquiring firm; m. evaluate the relative merits of high/low, range, interquartile range, and equal- weighted or asset-weighted standard deviation as measures of the internal dispersion of portfolio returns within a composite for annual periods; n. identify the types of investments that are subject to the GIPS standards for real estate and private equity; o. explain the provisions of the GIPS standards for real estate and private equity; p. explain the provisions of the GIPS standards for Wrap fee/Separately Managed Accounts; q. explain the requirements and recommended valuation hierarchy of the GIPS Valuation Principles; r. determine whether advertisements comply with the GIPS Advertising Guidelines; s. discuss the purpose, scope, and process of verification; t. discuss challenges related to the calculation of after-tax returns; u. identify and explain errors and omissions in given performance presentations and recommend changes that would bring them into compliance with GIPS standards. 	<ul style="list-style-type: none"> j. explain the requirements and recommendations of the GIPS standards with respect to disclosure, including fees, the use of leverage and derivatives, conformity with laws and regulations that conflict with the GIPS standards, and noncompliant performance periods; k. explain the requirements and recommendations of the GIPS standards with respect to presentation and reporting, including the required timeframe of compliant performance periods, annual returns, composite assets, and benchmarks; l. explain the conditions under which the performance of a past firm or affiliation must be linked to or used to represent the historical performance of a new or acquiring firm; m. evaluate the relative merits of high/low, range, interquartile range, and equal- weighted or asset- weighted standard deviation as measures of the internal dispersion of portfolio returns within a composite for annual periods; n. identify the types of investments that are subject to the GIPS standards for real estate and private equity; o. explain the provisions of the GIPS standards for real estate and private equity; p. explain the provisions of the GIPS standards for Wrap fee/Separately Managed Accounts; q. explain the requirements and recommended valuation hierarchy of the GIPS Valuation Principles; r. determine whether advertisements comply with the GIPS Advertising Guidelines; s. discuss the purpose, scope, and process of verification; t. discuss challenges related to the calculation of after- tax returns; u. identify and explain errors and omissions in given performance presentations and recommend changes that would bring them into compliance with GIPS standards.
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2019	2020
Behavioral Finance Study Session 4	Behavioral Finance Study Session 3
READING 7. THE BEHAVIORAL FINANCE PERSPECTIVE	READING 7. THE BEHAVIORAL FINANCE PERSPECTIVE
<ul style="list-style-type: none"> a. contrast traditional and behavioral finance perspectives on investor decision making; b. contrast expected utility and prospect theories of investment decision making; c. discuss the effect that cognitive limitations and bounded rationality may have on investment decision making; d. compare traditional and behavioral finance perspectives on portfolio construction and the behavior of capital markets. 	<ul style="list-style-type: none"> a. contrast traditional and behavioral finance perspectives on investor decision making; b. contrast expected utility and prospect theories of investment decision making; c. discuss the effect that cognitive limitations and bounded rationality may have on investment decision making; d. compare traditional and behavioral finance perspectives on portfolio construction and the behavior of capital markets.
READING 8. THE BEHAVIORAL BIASES OF INDIVIDUALS	READING 8. THE BEHAVIORAL BIASES OF INDIVIDUALS
<ul style="list-style-type: none"> a. distinguish between cognitive errors and emotional biases; b. discuss commonly recognized behavioral biases and their implications for financial decision making; c. identify and evaluate an individual's behavioral biases; d. evaluate how behavioral biases affect investment policy and asset allocation decisions and recommend approaches to mitigate their effects. 	<ul style="list-style-type: none"> a. distinguish between cognitive errors and emotional biases; b. discuss commonly recognized behavioral biases and their implications for financial decision making; c. identify and evaluate an individual's behavioral biases; d. evaluate how behavioral biases affect investment policy and asset allocation decisions and recommend approaches to mitigate their effects.
READING 9. BEHAVIORAL FINANCE AND INVESTMENT PROCESSES	READING 9. BEHAVIORAL FINANCE AND INVESTMENT PROCESSES
<ul style="list-style-type: none"> a. explain the uses and limitations of classifying investors into personality types; b. discuss how behavioral factors affect adviser–client interactions; c. discuss how behavioral factors influence portfolio construction; d. explain how behavioral finance can be applied to the process of portfolio construction; e. discuss how behavioral factors affect analyst forecasts and recommend remedial actions for analyst biases; f. discuss how behavioral factors affect investment committee decision making and recommend techniques for mitigating their effects; g. describe how behavioral biases of investors can lead to market characteristics that may not be explained by traditional finance. 	<ul style="list-style-type: none"> a. explain the uses and limitations of classifying investors into personality types; b. discuss how behavioral factors affect adviser–client interactions; c. discuss how behavioral factors influence portfolio construction; d. explain how behavioral finance can be applied to the process of portfolio construction; e. discuss how behavioral factors affect analyst forecasts and recommend remedial actions for analyst biases; f. discuss how behavioral factors affect investment committee decision making and recommend techniques for mitigating their effects; g. describe how behavioral biases of investors can lead to market characteristics that may not be explained by traditional finance



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2019	2020
Applications of Economic Analysis to Portfolio Management	Capital Market Expectations
Study Session 8	Study Session 4
READING 16. CAPITAL MARKET EXPECTATIONS	READING 10. CAPITAL MARKET EXPECTATIONS, PART 1: FRAMEWORK AND MACRO CONSIDERATIONS
<ul style="list-style-type: none"> a. discuss the role of, and a framework for, capital market expectations in the portfolio management process; b. discuss challenges in developing capital market forecasts; c. demonstrate the application of formal tools for setting capital market expectations, including statistical tools, discounted cash flow models, the risk premium approach, and financial equilibrium models; d. explain the use of survey and panel methods and judgment in setting capital market expectations; e. discuss the inventory and business cycles and the effects that consumer and business spending and monetary and fiscal policy have on the business cycle; f. discuss the effects that the phases of the business cycle have on short-term/ long-term capital market returns; g. explain the relationship of inflation to the business cycle and the implications of inflation for cash, bonds, equity, and real estate returns; h. demonstrate the use of the Taylor rule to predict central bank behavior; i. interpret the shape of the yield curve as an economic predictor and discuss the relationship between the yield curve and fiscal and monetary policy; j. identify and interpret the components of economic growth trends and demonstrate the application of economic growth trend analysis to the formulation of capital market expectations; k. explain how exogenous shocks may affect economic growth trends; l. identify and interpret macroeconomic, interest rate, and exchange rate linkages between economies; 	<ul style="list-style-type: none"> a. discuss the role of, and a framework for, capital market expectations in the portfolio management process; b. discuss challenges in developing capital market forecasts; c. explain how exogenous shocks may affect economic growth trends; d. discuss the application of economic growth trend analysis to the formulation of capital market expectations; e. compare major approaches to economic forecasting; f. discuss how business cycles affect short- and long-term expectations; g. explain the relationship of inflation to the business cycle and the implications of inflation for cash, bonds, equity, and real estate returns; h. discuss the effects of monetary and fiscal policy on business cycles; i. interpret the shape of the yield curve as an economic predictor and discuss the relationship between the yield curve and fiscal and monetary policy; j. identify and interpret macroeconomic, interest rate, and exchange rate linkages between economies.



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<ul style="list-style-type: none"> m. discuss the risks faced by investors in emerging-market securities and the country risk analysis techniques used to evaluate emerging market economies; n. compare the major approaches to economic forecasting; o. demonstrate the use of economic information in forecasting asset class returns; p. explain how economic and competitive factors can affect investment markets, sectors, and specific securities; q. discuss the relative advantages and limitations of the major approaches to forecasting exchange rates; r. recommend and justify changes in the component weights of a global investment portfolio based on trends and expected changes in macroeconomic factors. 	
	<p>READING 11. CAPITAL MARKET EXPECTATIONS, PART 2: FORECASTING ASSET CLASS RETURNS</p>
	<ul style="list-style-type: none"> a. discuss approaches to setting expectations for fixed-income returns; b. discuss risks faced by investors in emerging market fixed-income securities and the country risk analysis techniques used to evaluate emerging market economies; c. discuss approaches to setting expectations for equity investment market returns; d. discuss risks faced by investors in emerging market equity securities; e. explain how economic and competitive factors can affect expectations for real estate investment markets and sector returns; f. discuss major approaches to forecasting exchange rates; g. discuss methods of forecasting volatility; h. recommend and justify changes in the component weights of a global investment portfolio based on trends and expected changes in macroeconomic factors.

2019	2020
Asset Allocation and Related Decisions in Portfolio Management (1)	Asset Allocation and Related Decisions in Portfolio Management
Study Session 9	Study Session 5
READING 18. INTRODUCTION TO ASSET ALLOCATION	READING 12. OVERVIEW OF ASSET ALLOCATION
<ul style="list-style-type: none"> a. prepare an economic balance sheet for a client and interpret its implications for asset allocation; b. compare the investment objectives of asset-only, liability-relative, and goals- based asset allocation approaches; c. contrast concepts of risk relevant to asset-only, liability-relative, and goals- based asset allocation approaches; d. explain how asset classes are used to represent exposures to systematic risk and discuss criteria for asset class specification; e. explain the use of risk factors in asset allocation and their relation to traditional asset class–based approaches; f. select and justify an asset allocation based on an investor’s objectives and constraints; g. describe the use of the global market portfolio as a baseline portfolio in asset allocation; h. discuss strategic implementation choices in asset allocation, including passive/ active choices and vehicles for implementing passive and active mandates; i. discuss strategic considerations in rebalancing asset allocations. 	<ul style="list-style-type: none"> a. describe elements of effective investment governance and investment governance considerations in asset allocation; b. prepare an economic balance sheet for a client and interpret its implications for asset allocation; c. compare the investment objectives of asset- only, liability- relative, and goals- based asset allocation approaches; d. contrast concepts of risk relevant to asset- only, liability- relative, and goals- based asset allocation approaches; e. explain how asset classes are used to represent exposures to systematic risk and discuss criteria for asset class specification; f. explain the use of risk factors in asset allocation and their relation to traditional asset class–based approaches; g. select and justify an asset allocation based on an investor’s objectives and constraints; h. describe the use of the global market portfolio as a baseline portfolio in asset allocation; i. discuss strategic implementation choices in asset allocation, including passive/ active choices and vehicles for implementing passive and active mandates; j. discuss strategic considerations in rebalancing asset allocations.

2019	2020
Asset Allocation and Related Decisions in Portfolio Management (1)	Asset Allocation and Related Decisions in Portfolio Management
Study Session 9	Study Session 5
READING 19. PRINCIPLES OF ASSET ALLOCATION	READING 13. PRINCIPLES OF ASSET ALLOCATION
<ul style="list-style-type: none"> a. describe and critique the use of mean–variance optimization in asset allocation; b. recommend and justify an asset allocation using mean–variance optimization; c. interpret and critique an asset allocation in relation to an investor’s economic balance sheet; d. discuss asset class liquidity considerations in asset allocation; e. explain absolute and relative risk budgets and their use in determining and implementing an asset allocation; f. describe how client needs and preferences regarding investment risks can be incorporated into asset allocation; g. discuss the use of Monte Carlo simulation and scenario analysis to evaluate the robustness of an asset allocation; h. describe the use of investment factors in constructing and analyzing an asset allocation; i. recommend and justify an asset allocation based on the global market portfolio; j. describe and evaluate characteristics of liabilities that are relevant to asset allocation; k. discuss approaches to liability-relative asset allocation; l. recommend and justify a liability-relative asset allocation; m. recommend and justify an asset allocation using a goals-based approach; n. describe and critique heuristic and other approaches to asset allocation; o. discuss factors affecting rebalancing policy. 	<ul style="list-style-type: none"> a. describe and critique the use of mean–variance optimization in asset allocation; b. recommend and justify an asset allocation using mean–variance optimization; c. interpret and critique an asset allocation in relation to an investor’s economic balance sheet; d. discuss asset class liquidity considerations in asset allocation; e. explain absolute and relative risk budgets and their use in determining and implementing an asset allocation; f. describe how client needs and preferences regarding investment risks can be incorporated into asset allocation; g. discuss the use of Monte Carlo simulation and scenario analysis to evaluate the robustness of an asset allocation; h. describe the use of investment factors in constructing and analyzing an asset allocation; i. recommend and justify an asset allocation based on the global market portfolio; j. describe and evaluate characteristics of liabilities that are relevant to asset allocation; k. discuss approaches to liability- relative asset allocation; l. recommend and justify a liability- relative asset allocation; m. recommend and justify an asset allocation using a goals- based approach; n. describe and critique heuristic and other approaches to asset allocation; o. discuss factors affecting rebalancing policy.

2019	2020
Asset Allocation and Related Decisions in Portfolio Management (2)	Asset Allocation and Related Decisions in Portfolio Management
Study Session 10	Study Session 5
READING 20. ASSET ALLOCATION WITH REAL-WORLD CONSTRAINTS	READING 14. ASSET ALLOCATION WITH REAL- WORLD CONSTRAINTS
<ul style="list-style-type: none"> a. discuss asset size, liquidity needs, time horizon, and regulatory or other considerations as constraints on asset allocation; b. discuss tax considerations in asset allocation and rebalancing; c. recommend and justify revisions to an asset allocation given change(s) in investment objectives and/or constraints; d. discuss the use of short- term shifts in asset allocation; e. identify behavioral biases that arise in asset allocation and recommend methods to overcome them. 	<ul style="list-style-type: none"> a. discuss asset size, liquidity needs, time horizon, and regulatory or other considerations as constraints on asset allocation; b. discuss tax considerations in asset allocation and rebalancing; c. recommend and justify revisions to an asset allocation given change(s) in investment objectives and/or constraints; d. discuss the use of short- term shifts in asset allocation; e. identify behavioral biases that arise in asset allocation and recommend methods to overcome them.

2019	2020
	Derivatives and Currency Management
	Study Session 6
	READING 15. OPTIONS STRATEGIES
	<ul style="list-style-type: none"> a. demonstrate how an asset's returns may be replicated by using options; b. discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a covered call position; c. discuss the investment objective(s), structure, payoff, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of a protective put position; d. compare the delta of covered call and protective put positions with the position of being long an asset and short a forward on the underlying asset; e. compare the effect of buying a call on a short underlying position with the effect of selling a put on a short underlying position; f. discuss the investment objective(s), structure, payoffs, risk(s), value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of the following option strategies: bull spread, bear spread, straddle, and collar; g. describe uses of calendar spreads; h. discuss volatility skew and smile; i. identify and evaluate appropriate option strategies consistent with given investment objectives; j. demonstrate the use of options to achieve targeted equity risk exposures.

2019	2020
	Derivatives and Currency Management
	Study Session 6
	READING 16. SWAPS, FORWARDS, AND FUTURES STRATEGIES
	<ul style="list-style-type: none"> a. demonstrate how interest rate swaps, forwards, and futures can be used to modify a portfolio's risk and return; b. demonstrate how currency swaps, forwards, and futures can be used to modify a portfolio's risk and return; c. demonstrate how equity swaps, forwards, and futures can be used to modify a portfolio's risk and return; d. demonstrate the use of volatility derivatives and variance swaps; e. demonstrate the use of derivatives to achieve targeted equity and interest rate risk exposures; f. demonstrate the use of derivatives in asset allocation, rebalancing, and inferring market expectations.

2019	2020
Asset Allocation and Related Decisions in Portfolio Management (2)	Derivatives and Currency Management
Study Session 10	Study Session 6
READING 21. CURRENCY MANAGEMENT: AN INTRODUCTION	READING 17. CURRENCY MANAGEMENT: AN INTRODUCTION
<ul style="list-style-type: none"> a. analyze the effects of currency movements on portfolio risk and return; b. discuss strategic choices in currency management; c. formulate an appropriate currency management program given financial market conditions and portfolio objectives and constraints; d. compare active currency trading strategies based on economic fundamentals, technical analysis, carry- trade, and volatility trading; e. describe how changes in factors underlying active trading strategies affect tactical trading decisions; f. describe how forward contracts and FX (foreign exchange) swaps are used to adjust hedge ratios; g. describe trading strategies used to reduce hedging costs and modify the risk– return characteristics of a foreign- currency portfolio; h. describe the use of cross- hedges, macro- hedges, and minimum-variance- hedge ratios in portfolios exposed to multiple foreign currencies; i. discuss challenges for managing emerging market currency exposures. 	<ul style="list-style-type: none"> a. analyze the effects of currency movements on portfolio risk and return; b. discuss strategic choices in currency management; c. formulate an appropriate currency management program given financial market conditions and portfolio objectives and constraints; d. compare active currency trading strategies based on economic fundamentals, technical analysis, carry- trade, and volatility trading; e. describe how changes in factors underlying active trading strategies affect tactical trading decisions; f. describe how forward contracts and FX (foreign exchange) swaps are used to adjust hedge ratios; g. describe trading strategies used to reduce hedging costs and modify the risk– return characteristics of a foreign- currency portfolio; h. describe the use of cross- hedges, macro- hedges, and minimum-variance- hedge ratios in portfolios exposed to multiple foreign currencies; i. discuss challenges for managing emerging market currency exposures.

2019	2020
Fixed- Income Portfolio Management (1)	Fixed- Income Portfolio Management (1)
Study Session 11	Study Session 7
READING 22. INTRODUCTION TO FIXED- INCOME PORTFOLIO MANAGEMENT	READING 18. OVERVIEW OF FIXED- INCOME PORTFOLIO MANAGEMENT
<ul style="list-style-type: none"> a. discuss roles of fixed-income securities in portfolios; b. describe how fixed-income mandates may be classified and compare features of the mandates; c. describe bond market liquidity, including the differences among market sub-sectors, and discuss the effect of liquidity on fixed-income portfolio management; d. describe and interpret a model for fixed-income returns; e. discuss the use of leverage, alternative methods for leveraging, and risks that leverage creates in fixed-income portfolios; f. discuss differences in managing fixed-income portfolios for taxable and tax exempt investors. 	<ul style="list-style-type: none"> a. discuss roles of fixed- income securities in portfolios; b. describe how fixed- income mandates may be classified and compare features of the mandates; c. describe bond market liquidity, including the differences among market sub- sectors, and discuss the effect of liquidity on fixed-income portfolio management; d. describe and interpret a model for fixed- income returns; e. discuss the use of leverage, alternative methods for leveraging, and risks that leverage creates in fixed- income portfolios; f. discuss differences in managing fixed- income portfolios for taxable and tax- exempt investors.
READING 23. LIABILITY- DRIVEN AND INDEX- BASED STRATEGIES	READING 19. LIABILITY- DRIVEN AND INDEX- BASED STRATEGIES
<ul style="list-style-type: none"> a. describe liability-driven investing; b. evaluate strategies for managing a single liability; c. compare strategies for a single liability and for multiple liabilities, including alternative means of implementation; d. evaluate liability-based strategies under various interest rate scenarios and select a strategy to achieve a portfolio's objectives; e. explain risks associated with managing a portfolio against a liability structure; f. discuss bond indexes and the challenges of managing a fixed-income portfolio to mimic the characteristics of a bond index; g. compare alternative methods for establishing bond market exposure passively; h. discuss criteria for selecting a benchmark and justify the selection of a benchmark; i. describe construction, benefits, limitations, and risk–return characteristics of a laddered bond portfolio. 	<ul style="list-style-type: none"> a. describe liability- driven investing; b. evaluate strategies for managing a single liability; c. compare strategies for a single liability and for multiple liabilities, including alternative means of implementation; d. evaluate liability- based strategies under various interest rate scenarios and select a strategy to achieve a portfolio's objectives; e. explain risks associated with managing a portfolio against a liability structure; f. discuss bond indexes and the challenges of managing a fixed- income portfolio to mimic the characteristics of a bond index; g. compare alternative methods for establishing bond market exposure passively; h. discuss criteria for selecting a benchmark and justify the selection of a benchmark; i. describe construction, benefits, limitations, and risk–return characteristics of a laddered bond portfolio.



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2019	2020
Fixed- Income Portfolio Management (2)	Fixed- Income Portfolio Management (2)
Study Session 12	Study Session 8
READING 24. YIELD CURVE STRATEGIES	READING 20. YIELD CURVE STRATEGIES
<ul style="list-style-type: none"> a. describe major types of yield curve strategies; b. explain how to execute a carry trade; c. explain why and how a fixed- income portfolio manager might choose to alter portfolio convexity; d. formulate a portfolio positioning strategy given forward interest rates and an interest rate view; e. explain how derivatives may be used to implement yield curve strategies; f. evaluate a portfolio's sensitivity to a change in curve slope using key rate durations of the portfolio and its benchmark; g. discuss inter- market curve strategies; h. construct a duration- neutral government bond portfolio to profit from a change in yield curve curvature; i. evaluate the expected return and risks of a yield curve strategy. 	<ul style="list-style-type: none"> a. describe major types of yield curve strategies; b. explain how to execute a carry trade; c. explain why and how a fixed- income portfolio manager might choose to alter portfolio convexity; d. formulate a portfolio positioning strategy given forward interest rates and an interest rate view; e. explain how derivatives may be used to implement yield curve strategies; f. evaluate a portfolio's sensitivity to a change in curve slope using key rate durations of the portfolio and its benchmark; g. discuss inter- market curve strategies; h. construct a duration- neutral government bond portfolio to profit from a change in yield curve curvature; i. evaluate the expected return and risks of a yield curve strategy.
READING 25. FIXED-INCOME ACTIVE MANAGEMENT: CREDIT STRATEGIES	READING 21. FIXED- INCOME ACTIVE MANAGEMENT: CREDIT STRATEGIES
<ul style="list-style-type: none"> a. describe risk considerations in investment- grade and high- yield corporate bond portfolios; b. compare the use of credit spread measures in portfolio construction; c. discuss bottom- up approaches to credit strategies; d. discuss top- down approaches to credit strategies; e. discuss liquidity risk in credit markets and how liquidity risk can be managed in a credit portfolio; f. describe how to assess and manage tail risk in credit portfolios; g. discuss considerations in constructing and managing portfolios across international credit markets; h. describe the use of structured financial instruments as an alternative to corporate bonds in credit portfolios. 	<ul style="list-style-type: none"> a. describe risk considerations in investment- grade and high- yield corporate bond portfolios; b. compare the use of credit spread measures in portfolio construction; c. discuss bottom- up approaches to credit strategies; d. discuss top- down approaches to credit strategies; e. discuss liquidity risk in credit markets and how liquidity risk can be managed in a credit portfolio; f. describe how to assess and manage tail risk in credit portfolios; g. discuss considerations in constructing and managing portfolios across international credit markets; h. describe the use of structured financial instruments as an alternative to corporate bonds in credit portfolios.

2019	2020
Equity Portfolio Management (1)	Equity Portfolio Management (1)
Study Session 13	Study Session 9
<p>READING 26. INTRODUCTION TO EQUITY PORTFOLIO MANAGEMENT</p> <ul style="list-style-type: none"> a. describe the roles of equities in the overall portfolio; b. describe how an equity manager's investment universe can be segmented; c. describe the types of income and costs associated with owning and managing an equity portfolio and their potential effects on portfolio performance; d. describe the potential benefits of shareholder engagement and the role an equity manager might play in shareholder engagement; e. describe rationales for equity investment across the passive–active spectrum. 	<p>READING 22. OVERVIEW OF EQUITY PORTFOLIO MANAGEMENT</p> <ul style="list-style-type: none"> a. describe the roles of equities in the overall portfolio; b. describe how an equity manager's investment universe can be segmented; c. describe the types of income and costs associated with owning and managing an equity portfolio and their potential effects on portfolio performance; d. describe the potential benefits of shareholder engagement and the role an equity manager might play in shareholder engagement; e. describe rationales for equity investment across the passive–active spectrum.
<p>READING 27. PASSIVE EQUITY INVESTING</p> <ul style="list-style-type: none"> a. discuss considerations in choosing a benchmark for a passively managed equity portfolio; b. compare passive factor- based strategies to market- capitalization-weighted indexing; c. compare different approaches to passive equity investing; d. compare the full replication, stratified sampling, and optimization approaches for the construction of passively managed equity portfolios; e. discuss potential causes of tracking error and methods to control tracking error for passively managed equity portfolios; f. explain sources of return and risk to a passively managed equity portfolio. 	<p>READING 23. PASSIVE EQUITY INVESTING</p> <ul style="list-style-type: none"> a. discuss considerations in choosing a benchmark for a passively managed equity portfolio; b. compare passive factor- based strategies to market- capitalization-weighted indexing; c. compare different approaches to passive equity investing; d. compare the full replication, stratified sampling, and optimization approaches for the construction of passively managed equity portfolios; e. discuss potential causes of tracking error and methods to control tracking error for passively managed equity portfolios; f. explain sources of return and risk to a passively managed equity portfolio.

2019	2020
Equity Portfolio Management (2)	Equity Portfolio Management (2)
Study Session 14	Study Session 10
READING 28. ACTIVE EQUITY INVESTING: STRATEGIES	READING 24. ACTIVE EQUITY INVESTING: STRATEGIES
<ul style="list-style-type: none"> a. compare fundamental and quantitative approaches to active management; b. analyze bottom- up active strategies, including their rationale and associated processes; c. analyze top- down active strategies, including their rationale and associated processes; d. analyze factor- based active strategies, including their rationale and associated processes; e. analyze activist strategies, including their rationale and associated processes; f. describe active strategies based on statistical arbitrage and market microstructure; g. describe how fundamental active investment strategies are created; h. describe how quantitative active investment strategies are created; i. discuss equity investment style classifications. 	<ul style="list-style-type: none"> a. compare fundamental and quantitative approaches to active management; b. analyze bottom- up active strategies, including their rationale and associated processes; c. analyze top- down active strategies, including their rationale and associated processes; d. analyze factor- based active strategies, including their rationale and associated processes; e. analyze activist strategies, including their rationale and associated processes; f. describe active strategies based on statistical arbitrage and market microstructure; g. describe how fundamental active investment strategies are created; h. describe how quantitative active investment strategies are created; i. discuss equity investment style classifications.
READING 29. ACTIVE EQUITY INVESTING: PORTFOLIO CONSTRUCTION	READING 25. ACTIVE EQUITY INVESTING: PORTFOLIO CONSTRUCTION
<ul style="list-style-type: none"> a. describe elements of a manager's investment philosophy that influence the port- folio construction process; b. discuss approaches for constructing actively managed equity portfolios; c. distinguish between Active Share and active risk and discuss how each measure relates to a manager's investment strategy; d. discuss the application of risk budgeting concepts in portfolio construction; e. discuss risk measures that are incorporated in equity portfolio construction and describe how limits set on these measures affect portfolio construction; 	<ul style="list-style-type: none"> a. describe elements of a manager's investment philosophy that influence the port- folio construction process; b. discuss approaches for constructing actively managed equity portfolios; c. distinguish between Active Share and active risk and discuss how each measure relates to a manager's investment strategy; d. discuss the application of risk budgeting concepts in portfolio construction; e. discuss risk measures that are incorporated in equity portfolio construction and describe how limits set on these measures affect portfolio construction;



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<p>f. discuss how assets under management, position size, market liquidity, and port- folio turnover affect equity portfolio construction decisions;</p> <p>g. evaluate the efficiency of a portfolio structure given its investment mandate;</p> <p>h. discuss the long- only, long extension, long/short, and equitized market- neutral approaches to equity portfolio construction, including their risks, costs, and effects on potential alphas.</p>	<p>f. discuss how assets under management, position size, market liquidity, and port- folio turnover affect equity portfolio construction decisions;</p> <p>g. evaluate the efficiency of a portfolio structure given its investment mandate;</p> <p>h. discuss the long- only, long extension, long/short, and equitized market- neutral approaches to equity portfolio construction, including their risks, costs, and effects on potential alphas.</p>
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2019	2020
	Alternative Investments for Portfolio Management
	Study Session 11
	READING 26. HEDGE FUND STRATEGIES
	<ul style="list-style-type: none"> a. discuss how hedge fund strategies may be classified; b. discuss investment characteristics, strategy implementation, and role in a port- folio of equity- related hedge fund strategies; c. discuss investment characteristics, strategy implementation, and role in a port- folio of event- driven hedge fund strategies; d. discuss investment characteristics, strategy implementation, and role in a port- folio of relative value hedge fund strategies; e. discuss investment characteristics, strategy implementation, and role in a port- folio of opportunistic hedge fund strategies; f. discuss investment characteristics, strategy implementation, and role in a port- folio of specialist hedge fund strategies; g. discuss investment characteristics, strategy implementation, and role in a port- folio of multi- manager hedge fund strategies; h. describe how factor models may be used to understand hedge fund risk exposures; i. evaluate the impact of an allocation to a hedge fund strategy in a traditional investment portfolio.
	READING 27. ASSET ALLOCATION TO ALTERNATIVE INVESTMENTS
	<ul style="list-style-type: none"> a. explain the roles that alternative investments play in multi- asset portfolios; b. compare alternative investments and bonds as risk mitigators in relation to a long equity position; c. compare traditional and risk- based approaches to defining the investment opportunity set, including alternative investments; d. discuss investment considerations that are important in allocating to different types of alternative investments; e. discuss suitability considerations in allocating to alternative investments; f. discuss approaches to asset allocation to alternative investments; g. discuss the importance of liquidity planning in allocating to alternative investments; h. discuss considerations in monitoring alternative investment programs.

2019	2020
	Private Wealth Management (1)
	Study Session 12
	READING 28. OVERVIEW OF PRIVATE WEALTH MANAGEMENT
	<ul style="list-style-type: none"> a. contrast private client and institutional client investment concerns; b. discuss information needed in advising private clients; c. identify tax considerations affecting a private client's investments; d. identify and formulate client goals based on client information; e. evaluate a private client's risk tolerance; f. describe technical and soft skills needed in advising private clients; g. evaluate capital sufficiency in relation to client goals; h. discuss the principles of retirement planning; i. discuss the parts of an investment policy statement (IPS) for a private client; j. prepare the investment objectives section of an IPS for a private client; k. evaluate and recommend improvements to an IPS for a private client; l. recommend and justify portfolio allocations and investments for a private client; m. describe effective practices in portfolio reporting and review; n. evaluate the success of an investment program for a private client; o. discuss ethical and compliance considerations in advising private clients; p. discuss how levels of service and range of solutions are related to different private clients.

2019	2020
Private Wealth Management (1)	Private Wealth Management (1)
Study Session 5	Study Session 12
READING 11. TAXES AND PRIVATE WEALTH MANAGEMENT IN A GLOBAL CONTEXT	READING 29. TAXES AND PRIVATE WEALTH MANAGEMENT IN A GLOBAL CONTEXT
<ul style="list-style-type: none"> a. compare basic global taxation regimes as they relate to the taxation of dividend income, interest income, realized capital gains, and unrealized capital gains; b. determine the effects of different types of taxes and tax regimes on future wealth accumulation; c. explain how investment return and investment horizon affect the tax impact associated with an investment; d. discuss the tax profiles of different types of investment accounts and explain their effects on after-tax returns and future accumulations; e. explain how taxes affect investment risk; f. discuss the relation between after-tax returns and different types of investor trading behavior; g. explain tax loss harvesting and highest-in/first-out (HIFO) tax lot accounting; h. demonstrate how taxes and asset location relate to mean–variance optimization. 	<ul style="list-style-type: none"> a. compare basic global taxation regimes as they relate to the taxation of dividend income, interest income, realized capital gains, and unrealized capital gains; b. determine the effects of different types of taxes and tax regimes on future wealth accumulation; c. explain how investment return and investment horizon affect the tax impact associated with an investment; d. discuss the tax profiles of different types of investment accounts and explain their effects on after- tax returns and future accumulations; e. explain how taxes affect investment risk; f. discuss the relation between after- tax returns and different types of investor trading behavior; g. explain tax loss harvesting and highest- in/first- out (HIFO) tax lot accounting; h. demonstrate how taxes and asset location relate to mean–variance optimization.
READING 12. ESTATE PLANNING IN A GLOBAL CONTEXT	READING 30. ESTATE PLANNING IN A GLOBAL CONTEXT
<ul style="list-style-type: none"> a. discuss the purpose of estate planning and explain the basic concepts of domestic estate planning, including estates, wills, and probate; b. explain the two principal forms of wealth transfer taxes and discuss effects of important non-tax issues, such as legal system, forced heirship, and marital property regime; c. determine a family’s core capital and excess capital, based on mortality probabilities and Monte Carlo analysis; d. evaluate the relative after-tax value of lifetime gifts and testamentary bequests; e. explain the estate planning benefit of making lifetime gifts when gift taxes are paid by the donor, rather than the recipient; 	<ul style="list-style-type: none"> a. discuss the purpose of estate planning and explain the basic concepts of domes- tic estate planning, including estates, wills, and probate; b. explain the two principal forms of wealth transfer taxes and discuss effects of important non- tax issues, such as legal system, forced heirship, and marital property regime; c. determine a family’s core capital and excess capital, based on mortality probabilities and Monte Carlo analysis; d. evaluate the relative after- tax value of lifetime gifts and testamentary bequests; e. explain the estate planning benefit of making lifetime gifts when gift taxes are paid by the donor, rather than the recipient;

<p>f. evaluate the after-tax benefits of basic estate planning strategies, including generation skipping, spousal exemptions, valuation discounts, and charitable gifts;</p> <p>g. explain the basic structure of a trust and discuss the differences between revocable and irrevocable trusts;</p> <p>h. explain how life insurance can be a tax-efficient means of wealth transfer;</p> <p>i. discuss the two principal systems (source jurisdiction and residence jurisdiction) for establishing a country's tax jurisdiction;</p> <p>j. discuss the possible income and estate tax consequences of foreign situated assets and foreign-sourced income;</p> <p>k. evaluate a client's tax liability under each of three basic methods (credit, exemption, and deduction) that a country may use to provide relief from double taxation;</p> <p>l. discuss how increasing international transparency and information exchange among tax authorities affect international estate planning.</p>	<p>f. evaluate the after- tax benefits of basic estate planning strategies, including generation skipping, spousal exemptions, valuation discounts, and charitable gifts;</p> <p>g. explain the basic structure of a trust and discuss the differences between revocable and irrevocable trusts;</p> <p>h. explain how life insurance can be a tax- efficient means of wealth transfer;</p> <p>i. discuss the two principal systems (source jurisdiction and residence jurisdiction) for establishing a country's tax jurisdiction;</p> <p>j. discuss the possible income and estate tax consequences of foreign situated assets and foreign- sourced income;</p> <p>k. evaluate a client's tax liability under each of three basic methods (credit, exemption, and deduction) that a country may use to provide relief from double taxation;</p> <p>l. discuss how increasing international transparency and information exchange among tax authorities affect international estate planning.</p>
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2019	2020
Private Wealth Management (2)	Private Wealth Management (2)
Study Session 6	Study Session 13
READING 13. CONCENTRATED SINGLE- ASSET POSITIONS	READING 31. CONCENTRATED SINGLE- ASSET POSITIONS
<ul style="list-style-type: none"> a. explain investment risks associated with a concentrated position in a single asset and discuss the appropriateness of reducing such risks; b. describe typical objectives in managing concentrated positions; c. discuss tax consequences and illiquidity as considerations affecting the management of concentrated positions in publicly traded common shares, privately held businesses, and real estate; d. discuss capital market and institutional constraints on an investor's ability to reduce a concentrated position; e. discuss psychological considerations that may make an investor reluctant to reduce his or her exposure to a concentrated position; f. describe advisers' use of goal-based planning in managing concentrated positions; g. explain uses of asset location and wealth transfers in managing concentrated positions; h. describe strategies for managing concentrated positions in publicly traded common shares; i. discuss tax considerations in the choice of hedging strategy; j. describe strategies for managing concentrated positions in privately held businesses; k. describe strategies for managing concentrated positions in real estate; l. evaluate and recommend techniques for tax efficiently managing the risks of concentrated positions in publicly traded common stock, privately held businesses, and real estate. 	<ul style="list-style-type: none"> a. explain investment risks associated with a concentrated position in a single asset and discuss the appropriateness of reducing such risks; b. describe typical objectives in managing concentrated positions; c. discuss tax consequences and illiquidity as considerations affecting the management of concentrated positions in publicly traded common shares, privately held businesses, and real estate; d. discuss capital market and institutional constraints on an investor's ability to reduce a concentrated position; e. discuss psychological considerations that may make an investor reluctant to reduce his or her exposure to a concentrated position; f. describe advisers' use of goal-based planning in managing concentrated positions; g. explain uses of asset location and wealth transfers in managing concentrated positions; h. describe strategies for managing concentrated positions in publicly traded common shares; i. discuss tax considerations in the choice of hedging strategy; j. describe strategies for managing concentrated positions in privately held businesses; k. describe strategies for managing concentrated positions in real estate; l. evaluate and recommend techniques for tax efficiently managing the risks of concentrated positions in publicly traded common stock, privately held businesses, and real estate

2019	2020
Private Wealth Management (2)	Private Wealth Management (2)
Study Session 6	Study Session 13
READING 14. RISK MANAGEMENT FOR INDIVIDUALS	READING 32. RISK MANAGEMENT FOR INDIVIDUALS
<ul style="list-style-type: none"> a. compare the characteristics of human capital and financial capital as components of an individual's total wealth; b. discuss the relationships among human capital, financial capital, and net wealth; c. discuss the financial stages of life for an individual; d. describe an economic (holistic) balance sheet; e. discuss risks (earnings, premature death, longevity, property, liability, and health risks) in relation to human and financial capital; f. describe types of insurance relevant to personal financial planning; g. describe the basic elements of a life insurance policy and how insurers price a life insurance policy; h. discuss the use of annuities in personal financial planning; i. discuss the relative advantages and disadvantages of fixed and variable annuities; j. analyze and critique an insurance program; k. discuss how asset allocation policy may be influenced by the risk characteristics of human capital; l. recommend and justify appropriate strategies for asset allocation and risk reduction when given an investor profile of key inputs. 	<ul style="list-style-type: none"> a. compare the characteristics of human capital and financial capital as components of an individual's total wealth; b. discuss the relationships among human capital, financial capital, and economic net worth; c. discuss the financial stages of life for an individual; d. describe an economic (holistic) balance sheet; e. discuss risks (earnings, premature death, longevity, property, liability, and health risks) in relation to human and financial capital; f. describe types of insurance relevant to personal financial planning; g. describe the basic elements of a life insurance policy and how insurers price a life insurance policy; h. discuss the use of annuities in personal financial planning; i. discuss the relative advantages and disadvantages of fixed and variable annuities; j. analyze and critique an insurance program; k. discuss how asset allocation policy may be influenced by the risk characteristics of human capital; l. recommend and justify appropriate strategies for asset allocation and risk reduction when given an investor profile of key inputs.

2019	2020
	Portfolio Management for Institutional Investors
	Study Session 14
	READING 33. PORTFOLIO MANAGEMENT FOR INSTITUTIONAL INVESTORS
	<ul style="list-style-type: none"> a. discuss common characteristics of institutional investors as a group; b. discuss investment policy of institutional investors; c. discuss the stakeholders in the portfolio, the liabilities, the investment time horizons, and the liquidity needs of different types of institutional investors; d. describe the focus of legal, regulatory, and tax constraints affecting different types of institutional investors; e. evaluate risk considerations of private defined benefit (DB) pension plans in relation to 1) plan funded status, 2) sponsor financial strength, 3) interactions between the sponsor's business and the fund's investments, 4) plan design, and 5) workforce characteristics; f. prepare the investment objectives section of an institutional investor's investment policy statement; g. evaluate the investment policy statement of an institutional investor; h. evaluate the investment portfolio of a private DB plan, sovereign wealth fund, university endowment, and private foundation; i. describe considerations affecting the balance sheet management of banks and insurers.

2019	2020
	Trading, Performance Evaluation, and Manager Selection
	Study Session 15
	READING 34. TRADE STRATEGY AND EXECUTION
	<ul style="list-style-type: none"> a. discuss motivations to trade and how they relate to trading strategy; b. discuss inputs to the selection of a trading strategy; c. compare benchmarks for trade execution; d. select and justify a trading strategy (given relevant facts); e. describe factors that typically determine the selection of a trading algorithm class; f. contrast key characteristics of the following markets in relation to trade implementation: equity, fixed income, options and futures, OTC derivatives, and spot currency; g. explain how trade costs are measured and determine the cost of a trade; h. evaluate the execution of a trade; i. evaluate a firm's trading procedures, including processes, disclosures, and record keeping with respect to good governance.
	READING 35. PORTFOLIO PERFORMANCE EVALUATION
	<ul style="list-style-type: none"> a. explain the following components of portfolio evaluation and their interrelationships: performance measurement, performance attribution, and performance appraisal; b. describe attributes of an effective attribution process; c. distinguish between return attribution and risk attribution and between macro and micro return attribution; d. describe returns- based, holdings- based, holdings- based performance attribution, including advantages and disadvantages of each; e. interpret the sources of portfolio returns using a specified attribution approach; f. interpret the output from fixed- income attribution analyses; g. discuss considerations in selecting a risk attribution approach; h. distinguish between investment results attributable to the asset owner

	<p>versus those attributable to the investment manager;</p> <ul style="list-style-type: none"> i. discuss uses of liability- based benchmarks; j. describe types of asset- based benchmarks; k. discuss tests of benchmark quality; l. describe problems that arise in benchmarking alternative investments; m. describe the impact of benchmark misspecification on attribution and appraisal analysis; n. calculate and interpret the Sortino ratio, the appraisal ratio, upside/downside capture ratios, maximum drawdown, and drawdown duration; o. describe limitations of appraisal measures and related metrics; p. evaluate the skill of an investment manager.
	READING 36. INVESTMENT MANAGER SELECTION
	<ul style="list-style-type: none"> a. describe the components of a manager selection process, including due diligence; b. contrast Type I and Type II errors in manager hiring and continuation decisions; c. describe uses of returns- based and holdings- based style analysis in investment manager selection; d. describe uses of the upside capture ratio, downside capture ratio, maximum drawdown, drawdown duration, and up/down capture in evaluating managers; e. evaluate a manager's investment philosophy and investment decision-making process; f. evaluate the costs and benefits of pooled investment vehicles and separate accounts; g. compare types of investment manager contracts, including their major provisions and advantages and disadvantages; h. describe the three basic forms of performance- based fees; i. analyze and interpret a sample performance- based fee schedule.

2019	2020
	Cases in Portfolio Management and Risk Management
	Study Session 16
	READING 37. CASE STUDY IN PORTFOLIO MANAGEMENT: INSTITUTIONAL
	<ul style="list-style-type: none"> a. discuss tools for managing portfolio liquidity risk; b. discuss capture of the illiquidity premium as an investment objective; c. analyze asset allocation and portfolio construction in relation to liquidity needs and risk and return requirements and recommend actions to address identified needs; d. analyze actions in asset manager selection with respect to the Code of Ethics and Standards of Professional Conduct; e. analyze the costs and benefits of derivatives versus cash market techniques for establishing or modifying asset class or risk exposures; f. demonstrate the use of derivatives overlays in tactical asset allocation and rebalancing.
	READING 38. CASE STUDY IN RISK MANAGEMENT: PRIVATE WEALTH
	<ul style="list-style-type: none"> a. identify and analyze a family's risk exposures during the early career stage; b. recommend and justify methods to manage a family's risk exposures during the early career stage; c. identify and analyze a family's risk exposures during the career development stage; d. recommend and justify methods to manage a family's risk exposures during the career development stage; e. identify and analyze a family's risk exposures during the peak accumulation stage; f. recommend and justify methods to manage a family's risk exposures during the peak accumulation stage; g. identify and analyze a family's risk exposures during the early retirement stage; h. recommend and justify a plan to manage risks to an individual's retirement lifestyle goals.

2019	2020
The Asset Management Industry And Professionalism	
Study Session 3	
READING 5. OVERVIEW OF THE ASSET MANAGEMENT INDUSTRY AND PORTFOLIO MANAGEMENT	
<ul style="list-style-type: none"> a. describe the structure of the asset management industry; b. discuss a portfolio management process that supports achieving asset owners' objectives; c. discuss the elements of effective investment governance. 	
Private Wealth Management (1)	
Study Session 5	
READING 10. MANAGING INDIVIDUAL INVESTOR PORTFOLIOS	
<ul style="list-style-type: none"> a. discuss how source of wealth, measure of wealth, and stage of life affect an individual investors' risk tolerance; b. explain the role of situational and psychological profiling in understanding an individual investor's attitude toward risk; c. explain the influence of investor psychology on risk tolerance and investment choices; d. explain potential benefits, for both clients and investment advisers, of having a formal investment policy statement; e. explain the process involved in creating an investment policy statement; f. distinguish between required return and desired return and explain how these affect the individual investor's investment policy; g. explain how to set risk and return objectives for individual investor portfolios; h. discuss the effects that ability and willingness to take risk have on risk tolerance; i. discuss the major constraint categories included in an individual investor's investment policy statement; j. prepare and justify an investment policy statement for an individual investor; 	



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<ul style="list-style-type: none"> k. determine the strategic asset allocation that is most appropriate for an individual investor's specific investment objectives and constraints; l. compare Monte Carlo and traditional deterministic approaches to retirement planning and explain the advantages of a Monte Carlo approach. 	
Portfolio Management For Institutional Investors	
Study Session 7	
READING 15. MANAGING INSTITUTIONAL INVESTOR PORTFOLIOS	
<ul style="list-style-type: none"> a. contrast a defined- benefit plan to a defined- contribution plan and discuss the advantages and disadvantages of each from the perspectives of the employee and the employer; b. discuss investment objectives and constraints for defined- benefit plans; c. evaluate pension fund risk tolerance when risk is considered from the perspective of the 1) plan surplus, 2) sponsor financial status and profitability, 3) sponsor and pension fund common risk exposures, 4) plan features, and 5) workforce characteristics; d. prepare an investment policy statement for a defined- benefit plan; e. evaluate the risk management considerations in investing pension plan assets; f. prepare an investment policy statement for a participant directed defined- contribution plan; g. discuss hybrid pension plans (e.g., cash balance plans) and employee stock ownership plans; h. distinguish among various types of foundations, with respect to their description, purpose, and source of funds; i. compare the investment objectives and constraints of foundations, endowments, insurance companies, and banks; j. discuss the factors that determine investment policy for pension funds, foundation endowments, life and non-life insurance companies, and banks; 	



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<ul style="list-style-type: none"> k. prepare an investment policy statement for a foundation, an endowment, an insurance company, and a bank; l. contrast investment companies, commodity pools, and hedge funds to other types of institutional investors; m. compare the asset/liability management needs of pension funds, foundations, endowments, insurance companies, and banks; n. compare the investment objectives and constraints of institutional investors given relevant data, such as descriptions of their financial circumstances and attitudes toward risk. 	
Applications of Economic Analysis to Portfolio Management	
Study Session 8	
READING 16. CAPITAL MARKET EXPECTATIONS	
<ul style="list-style-type: none"> a. discuss the role of, and a framework for, capital market expectations in the portfolio management process; b. discuss challenges in developing capital market forecasts; c. demonstrate the application of formal tools for setting capital market expectations, including statistical tools, discounted cash flow models, the risk premium approach, and financial equilibrium models; d. explain the use of survey and panel methods and judgment in setting capital market expectations; e. discuss the inventory and business cycles and the effects that consumer and business spending and monetary and fiscal policy have on the business cycle; f. discuss the effects that the phases of the business cycle have on short-term/ long-term capital market returns; g. explain the relationship of inflation to the business cycle and the implications of inflation for cash, bonds, equity, and real estate returns; h. demonstrate the use of the Taylor rule to predict central bank behavior; i. interpret the shape of the yield curve as an economic predictor and discuss the relationship between the yield curve and fiscal and monetary policy; 	



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- j.** identify and interpret the components of economic growth trends and demonstrate the application of economic growth trend analysis to the formulation of capital market expectations;
- k.** explain how exogenous shocks may affect economic growth trends;
- l.** identify and interpret macroeconomic, interest rate, and exchange rate linkages between economies;
- m.** discuss the risks faced by investors in emerging-market securities and the country risk analysis techniques used to evaluate emerging market economies;
- n.** compare the major approaches to economic forecasting;
- o.** demonstrate the use of economic information in forecasting asset class returns;
- p.** explain how economic and competitive factors can affect investment markets, sectors, and specific securities;
- q.** discuss the relative advantages and limitations of the major approaches to forecasting exchange rates;
- r.** recommend and justify changes in the component weights of a global investment portfolio based on trends and expected changes in macroeconomic factors.

READING 17. EQUITY MARKET VALUATION

- a.** explain the terms of the Cobb-Douglas production function and demonstrate how the function can be used to model growth in real output under the assumption of constant returns to scale;
- b.** evaluate the relative importance of growth in total factor productivity, in capital stock, and in labor input given relevant historical data;
- c.** demonstrate the use of the Cobb-Douglas production function in obtaining a discounted dividend model estimate of the intrinsic value of an equity market;
- d.** critique the use of discounted dividend models and macroeconomic forecasts to estimate the intrinsic value of an equity market;
- e.** contrast top-down and bottom-up approaches to forecasting the earnings per share of an equity market index;
- f.** discuss the strengths and limitations of relative valuation models;
- g.** judge whether an equity market is under-, fairly, or over-valued using a relative equity valuation model.



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Alternative Investments for Portfolio Management	
Study Session 8	
READING 30. ALTERNATIVE INVESTMENTS PORTFOLIO MANAGEMENT	
<ul style="list-style-type: none"> a. describe common features of alternative investments and their markets and how alternative investments may be grouped by the role they typically play in a portfolio; b. explain and justify the major due diligence checkpoints involved in selecting active managers of alternative investments; c. explain distinctive issues that alternative investments raise for investment advisers of private wealth clients; d. distinguish among types of alternative investments; e. discuss the construction and interpretation of benchmarks and the problem of benchmark bias in alternative investment groups; f. evaluate the return enhancement and/or risk diversification effects of adding an alternative investment to a reference portfolio (for example, a portfolio invested solely in common equity and bonds); g. describe advantages and disadvantages of direct equity investments in real estate; h. discuss the major issuers and suppliers of venture capital, the stages through which private companies pass (seed stage through exit), the characteristic sources of financing at each stage, and the purpose of such financing; i. compare venture capital funds and buyout funds; j. discuss the use of convertible preferred stock in direct venture capital investment; k. explain the typical structure of a private equity fund, including the compensation to the fund's sponsor (general partner) and typical timelines; l. discuss issues that must be addressed in formulating a private equity investment strategy; m. compare indirect and direct commodity investment; 	



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<ul style="list-style-type: none"> n. describe the principal roles suggested for commodities in a portfolio and explain why some commodity classes may provide a better hedge against inflation than others; o. identify and explain the style classification of a hedge fund, given a description of its investment strategy; p. discuss the typical structure of a hedge fund, including the fee structure, and explain the rationale for high-water mark provisions; q. describe the purpose and characteristics of fund-funds hedge funds; r. discuss concerns involved in hedge fund performance evaluation; s. describe trading strategies of managed futures programs and the role of man-aged futures in a portfolio; t. describe strategies and risks associated with investing in distressed securities; u. explain event risk, market liquidity risk, market risk, and “J factor risk” in relation to investing in distressed securities. 	
Risk Management	
Study Session 16	
READING 31. RISK MANAGEMENT	
<ul style="list-style-type: none"> a. discuss features of the risk management process, risk governance, risk reduction, and an enterprise risk management system; b. evaluate strengths and weaknesses of a company’s risk management process; c. describe steps in an effective enterprise risk management system; d. evaluate a company’s or a portfolio’s exposures to financial and nonfinancial risk factors; e. calculate and interpret value at risk (VaR) and explain its role in measuring overall and individual position market risk; f. compare the analytical (variance–covariance), historical, and Monte Carlo methods for estimating VaR and discuss the advantages and disadvantages of each; g. discuss advantages and limitations of VaR and its extensions, 	

<p>including cash flow at risk, earnings at risk, and tail value at risk;</p> <p>h. compare alternative types of stress testing and discuss advantages and disadvantages of each;</p> <p>i. evaluate the credit risk of an investment position, including forward contract, swap, and option positions;</p> <p>j. demonstrate the use of risk budgeting, position limits, and other methods for managing market risk;</p> <p>k. demonstrate the use of exposure limits, marking to market, collateral, netting arrangements, credit standards, and credit derivatives to manage credit risk;</p> <p>l. discuss the Sharpe ratio, risk-adjusted return on capital, return over maximum drawdown, and the Sortino ratio as measures of risk-</p> <p>m. demonstrate the use of VaR and stress testing in setting capital requirements.</p>	
Risk Management Applications of Derivatives	
Study Session 17	
READING 32. RISK MANAGEMENT APPLICATIONS OF FORWARD AND FUTURES STRATEGIES	
<p>a. demonstrate the use of equity futures contracts to achieve a target beta for a stock portfolio and calculate and interpret the number of futures contracts required;</p> <p>b. construct a synthetic stock index fund using cash and stock index futures (equitizing cash);</p> <p>c. explain the use of stock index futures to convert a long stock position into synthetic cash;</p> <p>d. demonstrate the use of equity and bond futures to adjust the allocation of a portfolio between equity and debt;</p> <p>e. demonstrate the use of futures to adjust the allocation of a portfolio across equity sectors and to gain exposure to an asset class in advance of actually committing funds to the asset class;</p> <p>f. explain exchange rate risk and demonstrate the use of forward</p>	

<p>contracts to reduce the risk associated with a future receipt or payment in a foreign currency;</p> <p>g. explain the limitations to hedging the exchange rate risk of a foreign market portfolio and discuss feasible strategies for managing such risk.</p>	
READING 33. RISK MANAGEMENT APPLICATIONS OF OPTION STRATEGIES	
<p>a. compare the use of covered calls and protective puts to manage risk exposure to individual securities;</p> <p>b. calculate and interpret the value at expiration, profit, maximum profit, maxi- mum loss, breakeven underlying price at expiration, and general shape of the graph for the following option strategies: bull spread, bear spread, butterfly spread, collar, straddle, box spread;</p> <p>c. calculate the effective annual rate for a given interest rate outcome when a borrower (lender) manages the risk of an anticipated loan using an interest rate call (put) option;</p> <p>d. calculate the payoffs for a series of interest rate outcomes when a floating rate loan is combined with 1) an interest rate cap, 2) an interest rate floor, or 3) an interest rate collar;</p> <p>e. explain why and how a dealer delta hedges an option position, why delta changes, and how the dealer adjusts to maintain the delta hedge;</p> <p>f. interpret the gamma of a delta-hedged portfolio and explain how gamma changes as in-the-money and out-of-the-money options move toward expiration.</p>	
READING 34. RISK MANAGEMENT APPLICATIONS OF SWAP STRATEGIES	
<p>a. demonstrate how an interest rate swap can be used to convert a floating-rate (fixed-rate) loan to a fixed-rate (floating-rate) loan;</p> <p>b. calculate and interpret the duration of an interest rate swap;</p> <p>c. explain the effect of an interest rate swap on an entity's cash flow risk;</p> <p>d. determine the notional principal value needed on an interest rate swap</p>	



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<p>to achieve a desired level of duration in a fixed-income portfolio;</p> <p>e. explain how a company can generate savings by issuing a loan or bond in its own currency and using a currency swap to convert the obligation into another currency;</p> <p>f. demonstrate how a firm can use a currency swap to convert a series of foreign cash receipts into domestic cash receipts;</p> <p>g. explain how equity swaps can be used to diversify a concentrated equity portfolio, provide international diversification to a domestic portfolio, and alter portfolio allocations to stocks and bonds;</p> <p>h. demonstrate the use of an interest rate swaption 1) to change the payment pattern of an anticipated future loan and 2) to terminate a swap.</p>	
Trading	
Study Session 18	
READING 35. EXECUTION OF PORTFOLIO DECISIONS	
<p>a. compare market orders with limit orders, including the price and execution uncertainty of each;</p> <p>b. calculate and interpret the effective spread of a market order and contrast it to the quoted bid–ask spread as a measure of trading cost;</p> <p>c. compare alternative market structures and their relative advantages;</p> <p>d. explain the criteria of market quality and evaluate the quality of a market when given a description of its characteristics;</p> <p>e. explain the components of execution costs, including explicit and implicit costs, and evaluate a trade in terms of these costs;</p> <p>f. calculate and discuss implementation shortfall as a measure of transaction costs;</p> <p>g. contrast volume weighted average price (VWAP) and implementation shortfall as measures of transaction costs;</p> <p>h. explain the use of econometric methods in pretrade analysis to estimate implicit transaction costs;</p> <p>i. discuss the major types of traders, based on their motivation to trade, time versus price preferences, and preferred order types;</p>	



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<ul style="list-style-type: none"> j. describe the suitable uses of major trading tactics, evaluate their relative costs, advantages, and weaknesses, and recommend a trading tactic when given a description of the investor's motivation to trade, the size of the trade, and key market characteristics; k. explain the motivation for algorithmic trading and discuss the basic classes of algorithmic trading strategies; l. discuss the factors that typically determine the selection of a specific algorithmic trading strategy, including order size, average daily trading volume, bid-ask spread, and the urgency of the order; m. explain the meaning and criteria of best execution; n. evaluate a firm's investment and trading procedures, including processes, disclosures, and record keeping, with respect to best execution; o. discuss the role of ethics in trading. 	
Performance Evaluation	
Study Session 19	
READING 36. EVALUATING PORTFOLIO PERFORMANCE	
<ul style="list-style-type: none"> a. demonstrate the importance of performance evaluation from the perspective of fund sponsors and the perspective of investment managers; b. explain the following components of portfolio evaluation: performance measurement, performance attribution, and performance appraisal; c. calculate, interpret, and contrast time-weighted and money-weighted rates of return and discuss how each is affected by cash contributions and withdrawals; d. identify and explain potential data quality issues as they relate to calculating rates of return; e. demonstrate the decomposition of portfolio returns into components attributable to the market, to style, and to active management; f. discuss the properties of a valid performance benchmark and explain advantages and disadvantages of alternative types of benchmarks; 	



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- g.** explain the steps involved in constructing a custom security-based benchmark;
- h.** discuss the validity of using manager universes as benchmarks;
- i.** evaluate benchmark quality by applying tests of quality to a variety of possible benchmarks;
- j.** discuss issues that arise when assigning benchmarks to hedge funds;
- k.** distinguish between macro and micro performance attribution and discuss the inputs typically required for each;
- l.** demonstrate and contrast the use of macro and micro performance attribution methodologies to identify the sources of investment performance;
- m.** discuss the use of fundamental factor models in micro performance attribution;
- n.** evaluate the effects of the external interest rate environment and active management on fixed-income portfolio returns;
- o.** explain the management factors that contribute to a fixed-income portfolio's total return and interpret the results of a fixed-income performance attribution analysis;
- p.** calculate, interpret, and contrast alternative risk-adjusted performance measures, including (in their ex post forms) alpha, information ratio, Treynor measure, Sharpe ratio, and M ;
- q.** explain how a portfolio's alpha and beta are incorporated into the information ratio, Treynor measure, and Sharpe ratio;
- r.** demonstrate the use of performance quality control charts in performance appraisal;
- s.** discuss the issues involved in manager continuation policy decisions, including the costs of hiring and firing investment managers;
- t.** contrast Type I and Type II errors in manager continuation decisions.