The syllabus for this basic education requirement is defined in the form of learning objectives that set forth, usually in broad terms, what the candidate should be able to do in actual practice.

Please check the "*Syllabus* Updates" section of the CAS Web Site for any changes to the *Syllabus*. The options for obtaining credit for this basic education requirement are listed below and in Examination Rules, C. Grades and Accreditation, Waivers of Examinations section of the *Syllabus*.

The purpose of the syllabus is to develop the candidate's knowledge of investment and financial markets. A thorough knowledge of calculus, probability, and interest theory is assumed.

A. Investment Markets

LEARNING OBJECTIVES
1. Understand mean-variance portfolio theory and use it to calculate risk-return relationships for assets and portfolios.
2. Understand asset-pricing models, including the capital asset pricing model, and factor models.
3. Understand the different levels of market efficiency, and how behavioral finance explains market anomalies and inefficiencies.

B. Corporate Finance

LEARNING OBJECTIVES
1. Calculate and interpret different measures of investment risk, and understand their application in project analysis and capital budgeting.
2. Explain the key elements of capital structure considerations.

C. Financial Derivatives: Forwards and Futures

LEARNING OBJECTIVES
1. Understand the characteristics of forwards, and calculate prices, payoffs, and profits.
2. Understand the characteristics of futures and how they differ from forwards, including margins and marking-to-market.

D. Financial Derivatives: Options

LEARNING OBJECTIVES
1. Understand the characteristics and cash flows of financial options.
2. Calculate the value of European and American options using the binomial model.
3. Calculate the value of European options using the Black-Scholes option-pricing model
4. Identify the situations where the values of European and American options are the same.
5. Interpret the option Greeks (i.e., option price partial derivatives).
6. Explain and demonstrate how to control risk using the method of delta-hedging.
7. Explain the cash flow characteristics of exotic options.
8. Explain the properties of a lognormal distribution and explain the Black-Scholes formula as an expected value for a lognormal distribution.

Options for Obtaining Exam 3F Credit

The CAS will grant credit for Exam 3F to those who have successfully completed one of the following examinations. To obtain credit otherwise, candidates should follow the procedures outlined on the Waivers of Examination page of the CAS website.

Organization	Examination
Actuarial Society of South Africa	A214, Financial Engineering & Loss Reserving
Actuaries Institute (Australia)	CM2, Financial Engineering & Loss Reserving
Canadian Institute of Actuaries (CIA)	University Accreditation Program credit for Models for Financial Economics[1]
Institute of Actuaries of India	CM2, Financial Engineering & Loss Reserving
Institute and Faculty of Actuaries (U.K.)	CM2, Actuarial Mathematics 2
Society of Actuaries	IFM, Investment and Financial Markets. Last administration November 2022.

1. For credit granted through the CIA's University Accreditation Program, the list of candidates granted waivers by the CIA is provided to the CAS following the end of a semester. The CAS automatically updates its records. No further action is required of candidates.

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