Northwestern Kellogg ACF Placement Exam: Full Breakdown for Learning Module Design

I. Purpose and Context of the ACF Placement Exam

- **Primary Objective**: The Accelerated Corporate Finance (ACF) Placement Exam is the gateway for students seeking to enroll in FINC-440 (ACF) or waive Finance 1 at Kellogg School of Management. Passing the exam demonstrates foundational proficiency in key financial concepts, enabling students to begin advanced coursework.

- **Eligibility Impact**: Passing is a prerequisite for both taking ACF and being eligible for subsequent Finance 1 waiver exams.

- **Administration**: The exam is taken online via Canvas and is administered only once per student.

- **Time Limit**: 2 hours

- **Format**: Combination of numerical and multiple-choice questions

- **Open-Book Policy**: Students may consult textbooks or notes; however, time constraints make heavy referencing impractical. Mastery is expected.

- **Honor Code Enforcement**: The exam must be completed independently. Discussion or collaboration regarding content is strictly prohibited before, during, or after the test.

II. Topics and Competency Areas

1. Present Value and Amortization Calculations

- Calculate present value (PV) of:
- A single future cash flow
- A series of future cash flows (annuities)
- Compute periodic loan payments given:
- Loan principal
- Interest rate (annual/monthly)
- Term (number of periods)

Sample Problems: - What is the present value of receiving $1,000 annually for 5 years at a 6% discount rate? - What is the monthly payment on a $100,000 loan over 20 years at 4% APR?

2. Portfolio Return and Risk

- Calculate expected return of a portfolio using weighted average returns.
- Compute portfolio variance/standard deviation, including scenarios with correlation coefficients.

Sample Problems: - Portfolio: 60% in Asset A (8% return), 40% in Asset B (12% return). What is the expected return? - What is the variance/SD if correlation is 0.2?

3. Investment Returns and Bond Valuation

- Determine total return for equity investments (dividends and capital gains).
- Compute bond yield to maturity (YTM) using:
- Price
- Coupon payments
- Maturity value

Sample Problems: - Bond purchased at $950, 5% annual coupon, face value $1,000, 4 years to maturity. What is the YTM? - Buy stock at $20, receive $1 dividend, sell at $22. What is your total return?

4. Financial Statements: Classification and Fundamentals

- Recognize and classify items as:
- Assets (current/long-term)
- Liabilities (current/long-term)
- Equity

Sample Problems: - Is "Accounts Receivable" a current or long-term asset? - Classify "Inventory" or "Accounts Payable."

5. Income Statement & Balance Sheet Interactions

- Understand impact of transactions across financial statements
- Accrual accounting: Revenue recognition, credit sales, dividend payments

Sample Problems: - What happens to Net Income and Accounts Receivable when a sale is made on credit? - How does issuing debt impact the income statement and balance sheet?

III. Student Experiences and Strategic Insights

Key Observations:

- **Time Pressure**: Students unanimously report tight timing—there is insufficient room to search for answers. Speed and fluency are critical.
- **Quantitative Focus**: All questions are numeric. There are no essay or abstract theoretical questions.
- **Breadth of Topics**: The exam covers a wide range of finance concepts without drilling deeply into any one topic.
- **Review Importance**: Even experienced finance professionals (bankers, CFA Level 1 holders) stress the need for review. Rust is a significant disadvantage.
- **No Trick Questions**: Content is direct and mechanics-based. Accuracy in calculations trumps conceptual reasoning.

Tips from Students: - Prepare using CFA Level 1 prep, Khan Academy, old undergrad notes - Simulate test conditions by timing yourself - Use Excel or BA II Plus/HP 12C calculators efficiently - Build and memorize a personal formula sheet (don't rely on it during the test)

Common Pitfalls: - Overconfidence in professional experience without practice - Failure to simulate time pressure during preparation - Misclassification of financial statement items

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IV. Curriculum Alignment: ACF Course Syllabus Highlights

Three Core Decision Pillars

1. **Investment Decision** (e.g., Valuation, DCF)
2. **Financing Decision** (Capital Structure: Debt vs. Equity)
3. **Payout Decision** (Dividends vs. Reinvestment)

Key Topics Across Weeks

  • Week 1–2: Valuation, Forecasting, Cash Flows
  • Week 2: Risk/Return, CAPM, Cost of Capital
  • Week 3–4: DCF, Multiples, Options
  • Week 4: Real Options
  • Week 5: Dividend Policy
  • Week 6–8: Capital Structure (M&M, taxes, distress)
  • Week 9: Risk Management, Security Design

Assignments

  • Case Memos (3–5 pages)
  • Online quizzes (highest attempt counted)
  • Midterm and Final Exam (weighted 120 and 240 points)
  • Group work encouraged except where restricted

Skills Emphasized

  • Quantitative modeling (DCF, risk)
  • Conceptual structuring (capital structure)
  • Communication (case writing)

V. Recommended Preparation Resources

A. Textbooks

1. **Corporate Finance by Berk & DeMarzo (4th Ed.)**
2. Time Value: Ch. 3–4
3. Risk/Return: Ch. 10–12
4. Valuation/Bond Math: Ch. 6–9

5. Financial Statements: Ch. 2
6. **Alternative Texts**
7. Brealey, Myers & Allen: Principles of Corporate Finance
8. Ross, Westerfield & Jaffe: Corporate Finance

B. Online Resources

1. **Khan Academy**
2. Topics: PV, loan amortization, portfolio return, bond pricing
3. Style: Short videos, worked examples, interactive practice
4. **CFA Level 1 Materials**
5. Emphasizes formula use and step-by-step problem solving
6. Closely matches test format
7. **Investopedia / AccountingCoach**
8. Used for rapid concept clarification and calculator-style walkthroughs

C. Kellogg-Provided Documents

• [Official Waiver Site](#)
• [Exam Advice Page](#)
• [Finance Course Syllabi](#)

VI. Design Recommendations for Learning Module

Structure

1. **Intro Section**
2. Explain purpose and test format

3. Display honor code disclaimer

4. **Core Modules (x5)**

5. Each focused on a core concept (as outlined in Section II)

6. Include examples, interactive drills, and timed quizzes

7. **Rapid Simulation Mode**

8. Timed 30-minute mock test mode

9. Integrate Excel or calculator-based input fields

10. **Progress Tracker**

11. Visualize which areas are weak

12. Unlock difficulty levels based on proficiency

13. **Reference Hub**

14. Embedded Khan Academy videos
15. Formula bank with examples
16. Practice set database (user-generated or CFA-style)

VII. Final Summary

Pass Rate Predictors: - Prior exposure + dedicated review = success - Mechanical fluency > theoretical understanding

Exam Nature: - Practical, not esoteric - Breadth over depth - Speed over reference use

Next Steps for Development: - Create timed modules mimicking sample questions - Pair every exercise with the formula it tests - Offer users an adaptive diagnostic path

Let me know if you need a table version, JSON schema, or practice exam authoring guide next.