

# R M - Risk Management

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## Risk Management: R M

### Lower-Division Courses

### Upper-Division Courses

#### R M 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Risk Management.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### R M 357E. Introduction to Risk Management.

Same as Urban Studies 321R. Principles of risk management for individuals and organizations, financial aspects of insurance companies and markets, industry structure, managerial aspects of underwriting and pricing, and public policy issues. Three lecture hours a week for one semester. Only one of the following may be counted: Risk Management 357E, Urban Studies 321R, 351 (Topic: Intro to Risk Management), 351 (Topic 6).

#### R M 369K. Managing Employee Risks and Benefits.

Risk management issues involving financial consequences of life and health contingencies, health care finance, company management, pension planning, economics of industry structure, and public policy issues. Three lecture hours a week for one semester.

#### R M 376. Quantitative Methods in Finance.

Explores quantitative methods and techniques in optimization and simulation, and their use in financial decision making. Discusses theory and application in portfolio selection, options and other derivative pricing, index tracking, risk measures, volatility estimating. Specific topics will include linear, quadratic, nonlinear, and integer programming; dynamic programming; robust optimization; Monte Carlo methods and variance reduction techniques. Emphasis will be placed on problem solving with advanced computational programming languages. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### R M 377. Property-Liability Risk Management and Planning.

Analysis of property-liability risks of businesses, risk management tools, risk financing, and insurance contracts for financial planning purposes; investment and underwriting operations, market structures, and insurance regulation. Three lecture hours a week for one semester.

#### R M 179, 379. Independent Research in Risk Management.

Restricted to students in a business major. Conference course. Only one of the following may be counted: Accounting 179C, 379C, Business, Government, and Society 179, 379, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics; consent of instructor; written approval before the first meeting of the course from the department chair's office, on forms provided for that purpose.

## Graduate Courses

### R M 391. Topics in Decision Analysis.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

**Topic 1: Decision Analysis.** Descriptive and normative principles of decision making. Additional prerequisite: Admission to the PPA or MPA program or consent of instructor.

**Topic 2: Managing Decisions under Risk.** State-of-the-art methods and tools to analyze risky decisions and design optimal strategies. Practical knowledge and practice are emphasized.

**Topic 3: Research Issues in Decision Making.** Talks by students and faculty members with research interests in decision making, and group discussion of the talks and of students' decision-related research. Additional prerequisite: Admission to the doctoral program in the Department of Information, Risk, and Operations Management.

**Topic 4: Behavioral Decision Theory.** The psychology of decision making: how and why our judgments are more fallible than we ordinarily suppose, and the extent to which predictive judgment can be improved through use of normative strategies that tell us how we should make judgments and decisions.

### R M 192, 292, 392. Topics in Quantitative Finance.

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1: Modeling and Optimization in Finance.**

**Topic 2: Statistics for Finance.**

**Topic 3: Financial Engineering.**

**Topic 4: Mathematical Finance.**

**Topic 5: Computational Finance.**

### R M 194, 294, 394. Topics in Business Analytics.

Restricted to students admitted to the Master of Science in Information, Risk, and Operations Management program. Selected topics in business analytics. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

### R M 195, 295, 395. Seminar: Risk Management.

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1: Corporate Risk Management.** Analysis of risk management and security needs of businesses and individuals; related insurance coverages and other tools available to deal with risk.

**Topic 2: Financial and Economic Aspects of Risk Management.**

Analysis of risk management techniques and insurance company operations. Similarities between insurance pricing techniques and risk management methodology.

**Topic 3: Risk Management and Finance.** Examination of theories underlying risk management techniques for business and insurance mechanisms; theoretical analysis of problems and practices in risk management.

**Topic 5: Managing Environmental Risk.**

**Topic 6: Risk Analysis and Management.**

**Topic 7: Managing International Risk.** The global aspects of risk management; basic risk and crisis management principles pertinent to multinational firms; financially, legally, and culturally multinational marketplaces such as reinsurance markets, captive offshore insurance.

**Topic 8: Managing Employee Risks and Benefits.** Corporate planning and public policy issues associated with employee benefits.

## **Professional Courses**