This course is a practical introduction to the main concepts of risk management, namely market, credit, liquidity, operational, legal and regulatory, business, strategic, and reputation risk. However, the bulk of the course will focus on financial market and credit risk. The course will make little use of mathematical formalism and will emphasize intuitive quantitative arguments. Students are expected to be comfortable with basic probability and statistics and be able to program either in a formal language such as MATLAB, or in Excel. The programming requirement is very minimal and will only apply to the last assignment.

**Topics covered:**

1. Risk perspectives and the regulatory environment
   - moral hazard and adverse selection
   - corporate risk management
   - banks and regulations
   - Value-at-Risk
   - Basel Accords
   - Dodd-Frank Act
   - operational risk
   - model risk
   - credit risk
   - interest-rate risk
   - options risk
   - Risk-adjusted performance evaluation
2. Lessons from major financial disasters
   - Barings, Mettalgesellschaft, Orange County (California), Daiwa, Allied Irish Bank, and Long-Term Capital Management
3. Value-at-Risk Estimation
   - Analytic approximations (normal, delta-gamma)
   - Monte-Carlo simulation
   - Historical simulation
   - Back-testing and validation
   - Software (RiskMetrics)
   - Impact on regulatory capital requirements
4. Value-at-Risk pitfalls and limitations. Contrast between long-only portfolios and hedge funds.
5. Risk-management systems and operational risk
There is no required textbook for this course. However, the following are recommended.

Title: Value-at-Risk
Author: Philippe Jorion
Publisher: McGraw-Hill
Year: 2007
ISBN: 0-07-146495-6

Title: Elements of Financial Risk Management
Author: Peter Christoffersen
Publisher: Academic Press
Year: 2011
ISBN: 0123744482

Title: Market Risk Analysis: Value-at-Risk Models (Volume IV)
Author: Carol Alexander
Year: 2009
ISBN: 978-0470997888

Title: The Essentials of Risk Management
Authors: Michel Crouhy, Dan Galai, and Robert Mark
Publisher: McGraw-Hill
Year: 2006

Grading:
Based on weekly homework assignment (30%), end-of-module exam (50%), and class participation (20%).

The assignments and exam will evaluate students on their understanding of widely-used risk measures, their common estimation approaches, their advantages and their limitations.

General policies:

- Class attendance is mandatory and participation will affect the final grade. Students are therefore strongly encouraged to avoid electronic distractions (e-mail, cell phone texting, web browsing, etc.) during lectures.
- There will be no make-up exam
- Assignments must be turned in on time and will be subject to penalties if late.
- Information on current UF grading policies for assigning grade points can be consulted through the following link:
  https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx
- Students with a disability should contact the instructor at least one week prior to the start of the course to discuss specific accommodations.
Value-at-risk, or VaR for short, is a popular measure of risk which has achieved the high status of being written into industry regulations (see, for instance, Jorion, 1996; Pritsker, 1997). It suffers, however, from being unstable and difficult to work with numerically when losses are not "normally" distributed, which in fact is often the case, because loss distributions tend to exhibit "fat tails" or empirical discrete-ness.