

**NOVA Information Management School**

**NOVA IMS**

<b>Course</b>	Risk Management
<b>Coordinator:</b>	Jorge Bravo
<b>ECTS</b>	6
<b>Objectives:</b>	<p>At the end of the semester students should be able to:</p> <ul style="list-style-type: none"> <li>- Describe the risk management process and identify problems and challenges which can arise in the risk management process</li> <li>- Learn the concept of risk and differentiate between risk and uncertainty and identify and distinguish the different types of risks</li> <li>- Evaluate and apply tools and procedures used to measure and manage risk, including quantitative measures, qualitative assessment, and enterprise risk management</li> <li>- Interpret the relationship between risk and reward, understand the portfolio choice under uncertainty and the benefits from diversification</li> <li>- Apply appropriate methods to hedge financial and non-financial risks</li> <li>- Understand the Structure and mechanics of OTC and exchange markets and how to evaluate financial instruments</li> <li>- Understand how to use derivative securities in Hedging strategies</li> <li>- Understand the main tools used to measure and manage market, credit, currency risks</li> <li>- Understand the role of insurance in risk management</li> </ul>
<b>Curricular Unit</b> <b>Contents:</b>	<p>1. Foundations of risk management</p> <p>The nature of risk; Basic risk types, measurement and management tools, Creating value with risk management, The role of risk management in corporate governance, Enterprise Risk Management (ERM), Financial disasters and risk management failures</p> <p>2. Portfolio Theory</p> <p>Risk Measurement and Metrics; Risk and return; Attitudes toward Risks; Portfolio theory and diversification; Efficient frontier; Choice under</p>

	<p>Uncertainty: Expected Utility Theory; The Capital Asset Pricing Model (CAPM); Risk-adjusted performance measurement; Multi-factor models</p> <p>3. Financial Markets and Products</p> <p>Structure and mechanics of OTC and exchange markets; Equity, Currency, and Commodity Markets; Bonds and other Fixed-Income Securities; Interest rate risk measuring and managing; Introduction to derivative securities: payoff structure, mechanics, and valuation of forwards, futures, swaps and options; Foreign exchange risk; Rating agencies</p> <p>4. Market Risk Measurement and Management</p> <p>Value-at-Risk (VaR); Expected shortfall (ES) and other coherent risk measures; Extreme value theory (EVT)</p> <p>5. Credit Risk Measurement and Management</p> <p>6. Risk management and Insurance</p> <p>7. Valuation and risk models</p> <p>8. Introduction to Operational and Integrated Risk Management</p>
<b>Teaching methods:</b>	<p>Expositional and Questioning Methods</p> <p>Active Methods and Case Studies</p> <p>Investigation projects and practical applications.</p> <p>Knowledge development and learning capability.</p>
<b>Grading methods:</b>	<p>1st Season</p> <ul style="list-style-type: none"> <li>- Group Assignments (40% of final grade)</li> <li>- Individual final written exam (60% of final grade, with a minimum grade of 9/20)</li> </ul> <p>2nd Season</p> <ul style="list-style-type: none"> <li>- Group Work Assignments (30% of final grade)</li> <li>- Individual final exam (70% of final grade, with a minimum grade of 9/20)</li> </ul>
<b>Bibliography:</b>	<ul style="list-style-type: none"> <li>• Jorion, F. (2011). Financial Risk Manager Handbook (6th Ed), John Wiley &amp; Sons</li> <li>• Bessis, J. (2010). Risk Management in Banking, 3rd Edition. John Wiley &amp; Sons.</li> <li>• Rejda, George (2011). Principles of Risk Management and Insurance, 11/E. Prentice Hall</li> </ul>

	<ul style="list-style-type: none"><li>• Hull, J. (2003). Fundamentals of Futures and Options Markets, 8th Edition. Prentice Hall.</li><li>• Elton, Edwin J., Martin J. Gruber, Stephen J. Brown, William N. Goetzmann (2014), Modern Portfolio Theory and Investment Analysis, 9th Edition, John Wiley &amp; Sons, New York.</li></ul>
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