

Title of course	<b>Economics and Finance of Risk and Uncertainty</b>
Responsible instructor	Prof Diego d'Andria, PhD
Learning objectives	<ul style="list-style-type: none"> <li>▪ Understand the role of information in economic and financial contexts</li> <li>▪ Acquire the basic theoretical modelling tools to represent choice under limited information</li> <li>▪ Learn about the economic trade-offs met when searching for information</li> <li>▪ Learn the difference between risk and uncertainty and the different methodological approaches to risk, loss and uncertainty aversion</li> <li>▪ Be introduced to basic game theory and strategic behaviour under limited information</li> <li>▪ Learn about economic models assuming asymmetrical information or symmetric uncertainty</li> <li>▪ Learn about the non-rival nature of information and the consequences for its production and diffusion</li> <li>▪ Learn how markets deal with limited information by means of multiple contracts and financial instruments</li> </ul>
Course contents	<ol style="list-style-type: none"> <li>1. Information as an economic good</li> <li>2. Choice under limited information <ol style="list-style-type: none"> <li>a. The von Neumann-Morgenstern utility function</li> <li>b. Risk versus uncertainty</li> <li>c. Rules of thumb under Knightian uncertainty</li> </ol> </li> <li>3. Risk aversion and behavioural theories</li> <li>4. The role of information in financial markets <ol style="list-style-type: none"> <li>a. Markowitz efficient frontier</li> <li>b. The value of insurance, derivatives and hedging</li> </ol> </li> <li>5. Strategic behaviour: An introduction to game theory <ol style="list-style-type: none"> <li>a. The "prisoner's dilemma"</li> <li>b. "War of the sexes"</li> <li>c. "Beauty contest"</li> </ol> </li> <li>6. Asymmetric information <ol style="list-style-type: none"> <li>a. Markets for Lemons</li> <li>b. Models of entrepreneurial entry</li> <li>c. Contracts as screening devices</li> </ol> </li> <li>7. Symmetric uncertainty <ol style="list-style-type: none"> <li>a. The "superstars and mediocrities" model</li> </ol> </li> <li>8. How much information? <ol style="list-style-type: none"> <li>a. Search costs and the optimal stopping problem</li> <li>b. The value of waiting</li> </ol> </li> <li>9. Information and non-rivalry <ol style="list-style-type: none"> <li>a. The example of rating agencies</li> <li>b. Knowledge spillovers and R&amp;D investment</li> </ol> </li> </ol>
Teaching methods	<ul style="list-style-type: none"> <li>▪ Lectures</li> <li>▪ In-class discussion</li> <li>▪ Maieutic discourses</li> <li>▪ Exercises</li> <li>▪ Self-study</li> </ul>
Prerequisites	There are no formal requirements.
Suggested reading	<ul style="list-style-type: none"> <li>▪ Birchler U. and Büttler M. (2007), <i>Information Economics</i>, Routledge.</li> <li>▪ Handouts and further references will be given during the classes.</li> </ul>

Applicability	<p>This course is in particular applicable to the following Master programmes: International Business and Economics (M.A.; "IBE"), Finance (M.Sc.).</p> <p>This course is also applicable to other business-oriented Master programmes offered by Schmalkalden University of Applied Sciences.</p>
Workload	<p>Total workload: 180 hours, of them:</p> <ul style="list-style-type: none"> <li>▪ Lecture: 45</li> <li>▪ Self-study: 135, of them: <ul style="list-style-type: none"> <li>▪ Course preparation (in particular reading): 45</li> <li>▪ Follow-up: 45</li> <li>▪ Readings and exam preparation (including mid-term): 45</li> </ul> </li> </ul>
ECTS credit points and weighting factor	6 ECTS credit points; weighting factor: 6/120 (IBE) or 6/90 (Finance), respectively
Basis of student evaluation	<ul style="list-style-type: none"> <li>▪ Comprehensive written examination, 90 minutes (80%)</li> <li>▪ Mid-term exam, 60 minutes (20%)</li> </ul>
Time	First academic year
Frequency	Each academic year
Duration	One semester
Course type	Elective course
Remarks	Teaching language is English.