Introduction to the HSBC Quant Academy

HSBC Quant Academy for AGH WMS
Prepared by: Dr. Philippe J.S. De Brouwer
Honorary Consul of Belgium in Kraków
guest professor at the UJ, AGH, UEK and UW
board member of AGH
SVP at HSBC in Kraków
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Dr. Philippe De Brouwer

- Academic
  - Theoretical physicist and Business Engineer; solved the “fallacy of large numbers” puzzle (Samuelson).
  - Challenged Markowitz’s Mean Variance Theory, developed Maslowian Portfolio Theory.
- Career
  - Fortis/BNP (capital-guaranteed funds, director),
  - KBC (merged companies, CEO, market growth).
  - CIO of KBC Ireland (€32B, 1000 funds).
  - Head of Analytics RBS (financial risk, analytics, data)
  - SVP at HSBC (Model Risk Management CoE).
- Author: “The Big R-Book” and numerous scientific papers.

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The Lecture Plan

The Lecture Plan

HSBC Quants Academy Programme [proposed for AGH]

program coordinator	Philippe De Brouwer
program supervisor	Philippe De Brouwer
when	Mondays 15:00 -- 18:15
where	AGH / A3-A4 / 304 - 406

Breaks

2-7 April Spring Break
1st of May 2026
3rd of May 2026
4th of June

	time (h)	coordinator	lecturer	date
PART I: Introduction to Banking and Risk				
Introduction + Banking / financial services organizations	3.0	Philippe De Brouwer	Philippe De Brouwer	2-Mar-2026
Risk Management and risk types	3.0		TBC Jorge Rosales	9-Mar-2026
PART II: Market Risk				
Loss distributions and risk metrics	3.0	Jorge Rosales	Jorge Rosales	16-Mar-2026
FRTB (TBC)	3.0		Jakub Lis	23-Mar-2026
PART III: Credit Risk				
Introduction to Credit Risk & the modelling framework	3.0		Piotr Kobus	30-Mar-2026
Risk-Based Pricing	3.0		Roman Ivanov	13-Apr-2026
Regression techniques and scorecards in credit risk modelling	3.0	Piotr Kobus	Michal Kusy	20-Apr-2026
Risk Management in Pre-provision Net Revenue Forecasting	3.0		Kamil Stajerski + Marcin Nowik	27-Apr-2026
PART V: Valuation Adjustments				
Introduction to FVA + PVA	3.0	Eray Ferah	Artur Zajac	4-May-2026
Introduction to XVA + CCR	3.0		Eray Ferah	11-May-2026
PART VI: Operational Risk				
Introduction to quantitative operational risk	3.0	Jorge Rosales	Katarzyna Potasnik	18-May-2026
Natural Hazards as part of the credit risk"	3.0		Jakub JANKOWSKI	25-May-2026
PART VII: Elective Subjects and project councelling				
(TBC)	3.0	Philippe De Brouwer	Wojciech	1-Jun-2026
Quantum computing in banking	3.0		Jakub JANKOWSKI	8-Jun-2026
PART VII: Concluding remarks & Exam				
Student's presentations & exam + starting in HSBC	3.0	Philippe De Brouwer	volunteers	15-Jun-2026

The Exam

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The End-Work

Choice of project:

- Market Risk
- Credit Risk
- Counterparty Credit Risk (maybe)

Teamwork:

- 2 to 5 people per project
- You choose your team

Plan:

- **May:** communication of the project briefings
- **May:** teams and subjects to be submitted to prof. Dzieza
- **June :** presentation in HSBC - for each team:
  - 10 minutes presentation
  - 10 minutes discussion

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