

Financial Systems Specialization

Financial Systems is another important specialization within industrial engineering, covering a wide range of topics. It focuses on the use of advanced computational and informational technologies in financial markets and investment analysis. The application of financial engineering techniques in banks, brokerage firms, insurance companies, and treasury departments, as well as financial analysis for industrial and commercial institutions and the use of risk-reduction or risk management tools, are some of the key areas of this specialization.

Key Skills Required

- Financial analysis
- Risk management
- Mathematical modeling
- Financial programming
- Statistics and data mining
- Game theory
- Time series forecasting

Commonly Used Software

- Excel (VBA)
- Python (QuantLib, Pandas)
- MATLAB
- R
- Bloomberg Terminal
- SQL
- Power BI
- Tableau

Job Opportunities and Career Fields

- Banks
- Investment companies
- Insurance companies
- Stock exchanges and financial markets
- Risk analysis and management
- Financial modeling and forecasting
- Financial consulting
- FinTech startups