

Production and Service Systems Specialization

The initial Master's program in industrial engineering, titled simply "Industrial Engineering," focused on traditional and core topics of the field, including production planning, scheduling issues, queueing theory, design of production systems, and the application of some optimization topics. With the expansion of the service sector in the country's economy, new areas emerged for the development of industrial engineering, such as demand and revenue management, design of service systems, pricing and ordering in service industries. This need was addressed by the establishment of a new specialization in 2016 titled "Optimization of Systems." However, due to ambiguities in its educational objectives and challenges in implementation at universities, this specialization was replaced by the "Production and Service Systems" specialization. This new track aims to revitalize the traditional industrial engineering specialization while expanding it to meet scientific needs in service systems and enhancing core topics related to production systems.

Key Skills Required

- Production management
- Quality control
- Design of service systems
- Process optimization
- Analysis of production systems

Commonly Used Software

- SAP ERP
- Arena
- MATLAB
- Minitab
- Excel (Solver)
- Python

Job Opportunities and Career Fields

- Production management in industrial companies
- Process engineering
- Quality control
- Consulting in process optimization for production and service sectors