SEM – The first interdisciplinary master program in Service Management and Engineering

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SEM Director:

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Summary

- Background
- Master Program Description
- European dimension

Service innovation

- improve customer-provider interactions
- enhance the capability of organizations to create value with key stakeholders
- improve the quality of life
- enable self service that eliminates waiting and allows 24/7 access via modern devices

Service innovation requires new skills and deep knowledge that underpins the skill set .

The knowledge gap
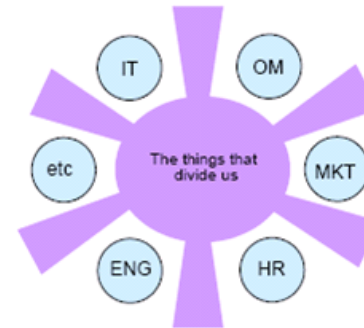
- IT – Information Technology
- OM – Operations Management
- MKT – Marketing
- HR – Human Resources
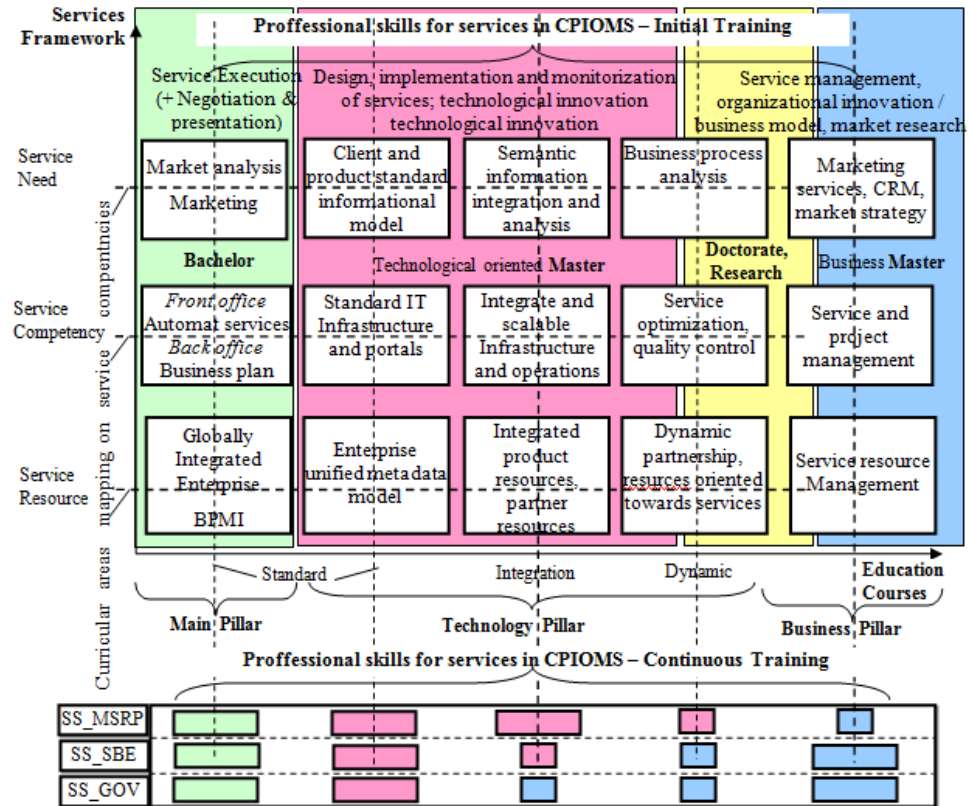- ENG – Engineering

T-shaped education

Complex communication

Expert thinking

- problem solvers in their home discipline
- interact with and understand specialists from a wide range of disciplines and functional areas
- adaptive innovators

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Educational Model for SS

Master Programs conforming to the SS Model

No.	Title of Master program	University	Study domain	Program type
1	**Service Engineering & Management (SEM)**	**UPB-AES**	**System_E.**	**Tech-o**
2	Sci., Design & Serv. Engn. in ETTI	UPB	Electron_E.	Tech-o
3	Advanced Software Services	UPB	CS & IT	IT-o
4	Information Protection & Management	UPB	System_E.	IT-o
5	Business Service Management	AES	Bus_Admin.	B-o
6	Advanced Data Mgmt for Bus. Sustainability	UTBv	System_E.	Tech-o
7	Information Systems & Services in Medicine	UPB-UMF	System_E.	IT-o
8	Service Oriented Architectures for Enterprise	UPB	System_E.	Tech-o
9	e-Government	UPB	CS & IT	IT-o
10	Management of Public Services	AES	Admin. & Public_Mngmt	Public_Adm-o
11	Services for Energy Efficiency	UTBv	Power_E.	Tech-o
12	Service Engn. in Telecommunication Networks	UPB	Electron_E.	Tech-o
13	Multimedia Services and Signal Processing	UPB	System_E.	IT-o

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Structure

2 YEARS

1st semester 5 courses	2nd semester 5 courses
3rd semester 5 courses	4th semester Preparing the Disertation

RESEARCH

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Occupations

- 213103 – Information system designer
- 213104 – Consultant on informatics
- 213908 – Specialist in security procedures and instruments for information systems
- 213906 – Information project manager
- 231001 – Professor assistant
- 250101 – Researcher in informatics
- 251413 – Researcher in computers
- 251416 – Researcher in automatic control
- 241115 – Investment analyst
- 241227 – Specialist in organizational development
- 241919 – Project manager ,
- 241922 – Client services analyst
- 241929 – Industrial strategy specialist

General competencies

- **New technologies**
  - design, understand and evaluate innovative technologies and processes
- **New interaction modes or services**
  - understand user and consumer needs
  - meet requirements and quality expectations
- **New business models**
  - leadership and management capacity to meet stakeholder interests
  - demand for organization flexibility, effectiveness and accountability

Specific competencies

ICT Information & Communication Technologies	PSA Psychology, Sociology and Arts	OMM Operations, Management & Marketing
Mobile technologies Information systems Human-Computer Interaction Internet technologies Multimedia technologies	Sociology of Organizations Cognitive Psychology Communication Information science and management Design	Service marketing Service Operations and Management Financial management Management of Innovation Service design and development

Teaching Staff

- Florin Anton, Lecturer Ph.D.
- Anamaria Ciobanu, Prof. Ph.D.
- Adrian Curaj, Prof. Ph.D.
- Liliana Dobrica, Prof. Ph.D.
- Monica Dragoicea, Assoc. Prof. Ph.D.
- Anca Ionita, Prof. Ph.D.
- Sanda Maiduc, Ph.D. Ec.
- Maximilian Nicolae, Lecturer Ph.D.
- Virginia-Ecaterina Oltean, Assoc. Prof. Ph.D.
- Laura Pana, Prof. Ph.D.
- Florin Pop, Assoc. Prof. Ph.D.
- Florin Radulescu, Prof. Ph.D.
- Silviu Raileanu, Lecturer Ph.D.
- Doina Serban, Prof. Ph.D.

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1ˢᵗ Semester

Courses
C11: Mathematical Modelling of Economic Processes
C12: Data Mining and Data Warehousing
C13: Architecture of Service Oriented Information Systems
C14: Marketing and Financial Performance of Business
C15: Network and Systems Security
Total: 18 hours
Research: 10 hours

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2nd Semester

Courses
C21: Business Process Modelling
C22: Supply Chain Management and Logistics
C23: Communication Management and Cognitive Psychology
C24: Foundations of Service Science
C25: Accounting and Financial Management for Services
Total: 18 hours
Research: 10 hours

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3rd Semester

Courses
C31: Enterprise Integration and Management Architectures
C32: Business Service Integration and Management
C33: Knowledge Engineering and Services Ecosystem
C34: Service Operations and Customer Relationship Management
C35: Intellectual Property and Entrepreneurship
Total: 18 hours
Research: 10 hours

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4th Semester

Courses
NO teaching activities
Preparing the Dissertation: 14 hours
Research: 16 hours

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Laboratories

- Cloud Computing
- Instrumentation, signals and systems
- Open Standard system Architecture for production networks and integrated services
- Computing systems and information technology
- Distributed Process Control, Robotics and Artificial Intelligence
- Communication Networks and Data Transmission
- Software Engineering and Application Management
- Industrial Information Systems

Research

- Automated computer network security breach detection system.
- Network IDS system
- Just In Time optimization in supply chains
- Virtual enterprise concept
- Collaboration in wireless systems.
- Optimal assignment paradigms in economic processes and manufacturing
- Business process modelling and requirement management
- Effects of cultural factors on service organizations

- Study of the key enterprise performance factors in services
- Financial planning of service firms
- Current approaches in distributed project management. Case study for a SOA project
- Design and development of Web services
- Meta model design for information project planning tools
- Privacy preserving Data Mining
- Opinion mining, sentiment analysis and opinion extraction
- Communication and inter-personalization processes in the virtual groups and communities that evolve in the ecology of the Web
- ERP implementing in a retail / distribution firm. Case studies

Agreements

■ Double degree diploma

Students that have been enrolled to study abroad at FEUP and have had a minimum of 6 months of study there, will get not only a degree from the Faculty of Automatic Control and Computers but also for the Faculty of Engineering from the University of Porto.

SEM Service Engineering and Management

← →

MESG Master on Service Engineering and Management

Comparison between UP and UPB master programs

Business Process Modeling

Capital Budgeting

Corporate Strategy

Creativity

Customer Relationship Management

Multimedia and New Services

Service Operations Management and Logistics

Information Systems I

New Service Development and Design

Services Marketing

MESG (UP)

Information Systems Architecture

Human-Computer Interaction

Enterprise Management

Decision Support Systems

Accounting and Financial Management

Requirements Engineering for Services

Human Resources Management

Organizational Behavior

Programe de master

Service Operations and Customer Relationship Management

Mathematical Modelling of Economic Processes

Data Mining and Data Warehousing

Architecture of Service Oriented Information Systems

Marketing and Financial Performance of Business

Network and Systems Security

Business Service Integration and Management

Knowledge Engineering and Services Ecosystem

SEM (UPB)

Intellectual Property and Entrepreneurship

Business Process Modelling

Supply Chain Management and Logistics

Communication Management and Cognitive Psychology

Foundations of Service Science

Accounting and Financial Management for Services

Enterprise Integration and Management Architectures

European dimension

Similar masters

- SSME – Service Science, Management, and Engineering, Masaryk University/ Faculty of Informatics/ Cehia

- Business Process Management Systems, University of Vienna/ Fakultät für Informatik/ Institut für Knowledge and Business Engineering/ Austria

- ICT Service Management, Katholieke Universiteit Leuven, Belgia

- Service Management and Service Engineering, Karlsruhe Institute of Technology (KIT)/ Karlsruhe Service Research Institute (KSRI)/ Germania

- European MSc in Business Informatics, Dublin City University/ School of Computing/ Ireland

Recognition

More Information

http://sske.cloud.upb.ro/sskemw/index.php/SEM_Master_Program

http://sem.cimr.pub.ro/

Thank you!