PRODUCTION AND PROCESS MANAGEMENT

General data

Course code:	M23VFB04E
ECTS credits:	6
Type of the course:	specialized core course
Semester:	Spring, Semester 3
Course restrictions:	-
Course leader (with availabilities):	*Dr. Zsuzsanna HAUCK, Associate Professor* *+36 72 501 599/ 63153* *hauckzs@ktk.pte.hu* *office: B119*
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1. Description and aims

Production and Process Management deals with the efficient utilization of resources to produce products and services. PPM plays a crucial role in achieving business strategy, as its sustainability is based mainly on outstanding operations capabilities that are not easy to copy. The module aims to make student familiar with possible ways to build a sustainable strategy based on managing production and service processes in an international business environment.

2. Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, students should be able to:

CILO 1. demonstrate the understanding of theories and terminology of production and process management and influencing factors of economic organizations and enterprises (PILO1);

CILO 2. demonstrate the understanding of competence-based value creation, principles, tasks and tools of managing production and service systems (PILO1);

CILO 3. use synthesised knowledge to recognize the different operating systems required to solve complex business problems in an international and multicultural environment (PILO4, PILO5);

CILO 4. critically evaluate situations in the globalized, constanty changing business environment and provide with deep analysis, including quantitative methods for the decision making process (PILO4, PILO5);

CILO 5. detect the importance of strategic fit and draw up recommendations with the aim of creating long-term competitive advantage (PILO4, PILO5);

CILO 6. come up with recommendations that demonstrate innovative, responsible, ethical and open-minded attitude (PILO7).

The remarks in brackets express each CILO's connection to the Program Intended Learning Outco mes (PILOs).)

3. Content, schedule

Topics will be raised through case studies which might change from semester to semester, depending on the new challenges in the world of practice and the availability of new case studies.

1. Defining operations management and operations strategy. How to analyse cases. Process analysis. Inventories and Supply Chains.
2. Designing products and services.
   Case studies: Fabritek Corporation, Harvard Business School (HBS) 669-004
   2U: Higher Education Rewired, HBS 9-620-044
3. Developing a production system, identifying bottlenecks
   Case study: Scharffen Berger Chocolate Maker, HBS 9-606-043
4. Bottlenecks and inventory build-up diagrams.
   Case study: National Cranberry Cooperative, HBS 9-688-122
5. Controlling supply chains and the optimal level of product availability
   Case studies: Half Century of Supply Chain Management at Wal-Mart, Ivey W12205
   Apple, Inc.: Managing a Global Supply Chain, Ivey W14161
6. SCM Business Game: The Beer Game (MIT)
7. Current issues of supply chain management
8. Operations based strategies – the role of platforms
   Case studies: Ant Financial (A), HBS 9-617-060
   Fasten: Challenging Uber and Lyft with a New Business Model, HBS 9-616-062
9. Managing queues.
   Case study: University Health Services: Walk-in-clinic, HBS 9-681-061
10. Lean management in production and service processes
    Case studies: Southwest Airlines in Baltimore, HBS 9-602-156
    Toyota Motor Manufacturing. USA, Inc, HBS 1-693-019
11. Strategies for Sustainable Business
    Case study: Greening Walmart: Progress and Controversy, HBS 9-316-042
12. Circular economy

4. Learning and teaching strategy, methodology

Principal teaching methodologies: case-based learning with student presentations and in-class discussions. (CILOs 1, 2, 3, 4, 5, 6)

The first week includes an interactive lecture about the basics of operations management and the course requirements. Students receive information about pre-reading materials (book chapters and case studies) and the intended learning outcomes. (CILO 1)

From the second week, every session starts with a student group presentation regarding the case study in the given topic, followed by in-class discussion with deep analysis, using appropriate methodologies to come to possible solutions and recommendations. To be able to participate in the discussion, continuous learning is required. (CILOs 1, 2, 3, 4, 5, 6)
One session includes a supply chain simulation where students have to work in groups, being responsible for different company roles. At the end of the game, every supply chain group has to discuss and submit their process- and responsibility-related findings. (CILO 2, 3)
At least one real-time case will be provided by a local company with field trip if possible. (CILOs 3, 4, 6)

5. Assessment

Formative assessment elements: Oral feedback on in-class activities, discussion of the solution of case studies and practical exercises solved during the classes.

Summative assessment elements:

Individual Assessment	85 %	**Group Assessment**	15 %

Name of the element	**Weight**	**Type**	**Details**	**Retake opportunity**	**Req.***	**Related CILOs**
Presentation	10%	course-work, group, oral	Presentation on a case study.	no	no	3,4,5,6
Beer Game	5%	course-work, group, written	Participation in the simulation and a written group assignment on the findings.	no	no	3,6
Midterm exam	15%	written exam, individual	A written exam based on topics 1-6 with essay questions and calculations.	no	no	1,2,3,4,5,6
Final exam	70%	written exam, individual	A written exam based on all topics with essay questions and calculations. Same structure as the midterm exam.	yes	yes	1,2,3,4,5,6
Extra points in class	max. +5%	individual course-work, oral	Extra points during classes for excellent solutions or comments.	no	no	1,2,3,4,5,6

** Req.: Completion of the element is required to pass the course, irrespective of the performance in other elements.*

6. Learning materials

- Essential

Case studies (see Moodle)

Longauer, D. – Hauck, Zs., Vasvári, T (2023).: Investigating Make-or-buy Decisions and the Impact of Learning- by-doing in the Semiconductor Industry, manuscript

Appropriate chapters of

HEIZER, J. - RENDER, B. M. - MUNSON, C. (2021): Operations Management: Sustainability and Supply Chain Management, 12th Global Edition, Pearson

- Recommended

Krajewski, L. J. - Malhotra, M. - Ritzman, L. (2022): Operations management: processes and supply chains, 13th Global edition, Pearson

Chopra, S, (2021): Supply Chain Management, 7th Global edition, Pearson

7. Further information

International aspects embedded with the course
- international case studies - guest lectures by professionals with international experience (the companies are local but are operating in international environment, raising issues e.g. regarding international supply chains that they are members of)
Ethics, Responsibility & Sustainability (ERS) aspects embedded with the course
Most topics directly include ERS-related discussion, e.g. - ethical dilemma of choosing the method of calling a worker to account - responsibility of providing the healthcare industry with good quality items - considering CO2 emission when making supply chain management decisions - environmental impact of overproduction, responsibility of underproduction - strategies for sustainable business
Connections to the world of practice of the course
Case studies One or two guest lectures (with company visit if possible) per semester as time allows, past examples include: - Lead time reduction at Körber - Logistic solutions for the pharmaceutical industry at Kontakt Elektro - The role of maintenance (cleaning) at BAT company