

MPH_AOPR (Operations Management and ERP - BC) – Questions Autumn _ Winter 2024

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All questions have to be studied with related study materials handed over to students during Brno's lessons (Autumn-Winter 2024). It is valid only for the MPH_AOPR course.

It will be reviewed (explained) during the remaining lesson on 2.12.2024 at the latest, considering that some dates should be reserved for the seminar work presentation day

The week starting on 2.12.2024 is more and less assigned for the presentations. This statement is not valid for practical part of the course on Wednesdays.

Exam dates on is.muni.cz be open on 6.12.2024. These days are already published on www.is.muni.cz and will also be presented by your professor after unlocking. All resources were uploaded to study material and MS TEAMS (partly at interaction syllabi.)

Erasmus students have first priority when enrolling for the exams dates of 16.12.2024 and 18.12.2024 (possibly also on 20.12.2024).

The below-listed material corresponds to all MS Dynamics 365 Business Central functions and their impact on operation management during practical lessons.

Mind you, access to MS Dynamics 365 Business Central is available on the cloud using your ID and passwords.

During the exams you can use already prepared activities on your private (personal) databases, however, all processes must be explained in detail, just as you had done in your partial presentations in classes

Files can also be found in MS TEAMS for your TEAM MPH_AOPR_2024.

Resources copied from study material folder

Comment : Files covering the methodology such as Linear Programming principles, CRM and Pareto analysis in Business Central, Use of Dimensions in Business Central-Basics Little's law and possibly Yield management will be uploaded after they are "on the scene". The reason for this is that I modify these files before their presentation

Operation Management area

↑ Operations Management operations_management /18		Skorkovský, J.	4. 9. 2024
<input type="radio"/>	W The_Theory_of_Constraints_and_product_Mix_20241111.docx	Skorkovský, J.	12. 11. 2024
<input checked="" type="checkbox"/>	X LP_EXCEL_SOLVER_USE_20241202.xlsx	Skorkovský, J.	Dnes
<input type="radio"/>	W Letter_related_to_CCPM_and_TOC_20241023.docx	Skorkovský, J.	23. 10. 2024
<input type="radio"/>	P 9_Drum_Buffer_Rope_20241118.ppt	Skorkovský, J.	18. 11. 2024
<input type="radio"/>	W 8_2_KT_Situation_Appraisal_and_Soulution_finding_20240811.docx	Skorkovský, J.	12. 11. 2024
<input type="radio"/>	P 8_1_Kepner-Tregoe_Methodology_version_7_20231120.pptx	Skorkovský, J.	12. 11. 2024
<input type="radio"/>	P 7_Product_mixture_II_20241111.pptx	Skorkovský, J.	12. 11. 2024
<input type="radio"/>	P 6_Product_mixture_I_20241111.pptx	Skorkovský, J.	12. 11. 2024
<input type="radio"/>	P 5_Ishikawa_fishbone_diagram_-_NEW_20241021.ppt	Skorkovský, J.	29. 10. 2024
<input type="radio"/>	P 4_Critical_Chain__202410.ppt	Skorkovský, J.	11. 10. 2024
<input type="radio"/>	P 3_Theory_of_Constraints_BASICS_20230930.ppt	Skorkovský, J.	7. 10. 2024
<input type="radio"/>	P 2_Operation_Management_Introduction_20240918.pptx	Skorkovský, J.	23. 9. 2024
<input checked="" type="checkbox"/>	P 13_Linear_programming-_introduction_and_examples_of_SOLVER_use_20...	Skorkovský, J.	Dnes
<input checked="" type="checkbox"/>	P 12_Economic_Order_Quantity-basics_20241202.pptx	Skorkovský, J.	Dnes
<input checked="" type="checkbox"/>	P 11_2_Little_s_law_basics_last_version_20231125.pptx	Skorkovský, J.	Dnes
<input checked="" type="checkbox"/>	P 11_1_Little_s_law_basics_last_version_20241125.pptx	Skorkovský, J.	Dnes
<input type="radio"/>	P 10_Balanced_Scorecard_20241125.pptx	Skorkovský, J.	19. 11. 2024
<input type="radio"/>	P 1_QUO_VADIS_MPH-AOPR_20240918.pptx	Skorkovský, J.	19. 9. 2024

Business Central area

 BC - 1-1 Access_and_basics_20240925	18.09.2024 10:48	Prezentace Micros...	1 031 kB
 BC - 1-2 History-development-benefits-teaching_ERP_at_ESF_20240925	25.09.2024 11:25	Prezentace Micros...	22 161 kB
 BC - 2 This is Business Central ENG_20240925	25.09.2024 11:34	Prezentace Micros...	27 457 kB
 BC - 2-1 Introduction_ERP_personification_20240925	02.10.2024 11:24	Prezentace Micros...	1 840 kB
 BC - 3-1 Techniques used-procedures-rules_20230925	08.09.2024 13:47	Prezentace Micros...	2 457 kB
 BC - 4 Selling_Purchasing_20241002	09.10.2024 13:38	Prezentace Micros...	2 012 kB
 BC - 5 Transfers_20241009	07.10.2024 13:33	Prezentace Micros...	2 434 kB
 BC - 6 Discounts_Business Central_20241009	16.10.2024 11:19	Prezentace Micros...	2 422 kB
 BC - 7 General Ledger and Payment Basics_20241023	22.10.2024 14:02	Prezentace Micros...	2 791 kB
 BC - 8 Financial Reporting basics_20241030	29.10.2024 15:00	Prezentace Micros...	3 717 kB
 BC - 8 Financial report_show_training_20241113	07.11.2024 12:26	Prezentace Micros...	282 kB
 BC - 9 Budgets_20241120	20.11.2024 13:49	Prezentace Micros...	1 532 kB
 BC - 9 Budgets_Supplement_20241120	20.11.2024 13:54	Prezentace Micros...	1 119 kB
 BC - 10 Dimensions_20241127	24.11.2024 18:35	Prezentace Micros...	5 834 kB
 BC_11 CRM_20241204	04.12.2024 9:32	Prezentace Micros...	3 222 kB
 Simple_scenario_Budgets ERP_Microsoft Dynamics_Business Central 20241120	20.11.2024 9:19	Dokument Micros...	205 kB

Practice Questions MS Dynamics 365 Business Central for course MPH_ AOPR

- The modularity of the ERP systems. What are process areas might be controlled by Business Central?
- Use of a search window to find application areas.
- Main windows (forms) used in ERP and **Syntax** for Debits and *Credits (posted General Ledger Entries)* – card window, line window, matrix window (e.g., **Item by location** from **Item cards**), header and line window such as **form** and **sub-form**, which is the basic structure for every BC document (*Sales Order, Purchase Order, Contact Card (CRM) and Transfer Order*)
- Main tables (*Item, Customer and Vendor - primary data fields such as Balance, a Basic unit of measure, the Payment condition, Costing Methods, etc.* **G/L account**- where can these accounts be found? You can use any time Help and Support, which the icon on the upper-right corner window can access.
- Purchase an item and impacts of **F9** (posting of Purchase order) -> Item and Vendor entries and G/L entries. *Create a new Purchase Order and show all impacts (Item ledger entries, General Ledger entries, and Vendor Ledger Entries!*
- Sale of an item and impacts of Sales Order by F9 (posting of Sales order)) -> item and customer entries, G/L entries. *Create new Sales Order and show all impacts (Item ledger entries, General Ledger entries, and Customer Ledger Entries!*
- The **Payment of the open entry** (Customer or Vendor) uses the Financial Journal and impacts. Show how to get payment from the chosen Customer with a non-zero Balance on the Customer Card. Explain what the meaning of Open entry is!
- All presented **Discounts** in Sales price lists (price discount, line discount in %, and invoice discount) and the use of these incentives! *What kind of discounts do we have in BC? Show setup of discount specified by examiner and impact of applied discount in sales lines!*
- Contact Card** and its profile and use of it. Questionair setup. The connection of the contact card to the Customer (Vendor) card. *What is the use of a contact card profile? How is the contact card connected to the Customer? How you can Create Pareto analysis related to sales ? Explain how you can create a profile that can split customers into three levels (A, B, and C- a simple example of Pareto analysis- this can also be used in question 18 in the theoretical section) as presented during academic sessions.)*

10. What is an Opportunity and Sales cycle? (*Show from the Contact card or Salesperson card*). And how to create a new interaction from the contact card (*use of wizard*)? *Use already-made Opportunities, where you can easily access Sales Cycles from the opportunity lines (see main hotkeys short-hands)*. Explain how you can create a profile that can split customers into three levels (A, B, and C- a simple example of Pareto analysis- this can also be used in question 18 in the theoretical section) as presented during academic sessions.)
Valid only if this part of BC will be presented in the course! This is related to Question 10 only !
11. **Transfer Order** (*Present to examiner transfer of a chosen item from Blue to Red Location*). *After Transfer Order is posted (F9), show by Ctrl-F7 created item entries! How many item entries are made during the transfer? Which time parameters related to the location card influence the time of transfer? Which time parameters influence shipping time (see Customer card or Transfer Routes by using the searching window.*
12. Financial reports. Start the chosen Financial report. *Name of the analysis and its template and how to edit it (raws, view and column) and see data by overview*). Explain the benefits and use of it.
13. Explain and show the primary use and benefits of Budgets. Explain and demonstrate the use of the Financial report tool to see actual and expected values and differences.
You can use already created Financial report in your personal database as well as created budgets! You can use already created Budget in your database with appropriate explanation.
14. Explain the primary use of dimensions and already created sales analysis
15. Explain the basics of dimensions (used, for instance, in the example related to budgets) –see question 13.

A list of Theory Resources – will be used below to show you mapping knowledge only – resources.

- A. Operation Management Introduction.
- B. Theory of Constraints
- C. Critical Chain (CCPM)
- D. Boston Matrix and Product Life Cycle (PLC) (**if provided**)
- E. Ishikawa fishbone diagram and its combination with Pareto Analysis
- F. Pareto Analysis Simplified
- G. Reserve clause (not used so far)
- H. OLAP and Business Intelligence (**if provided**)
- I. Magic Quadrant Matrix from Gartner company (**if provided**)
- J. Kepner -Tregoe Methodology
- K. Total Quality Management (**if provided**)
- L. Drum-Buffer-Rope principles
- M. Reserve clause (not used so far)
- N. Reserve clause (not used so far)
- O. Balanced Scorecard
- P. Reserve clause (not used so far)
- Q. Linear programming basics (will be part of the course on 9.12.)
- R. Yield management (**if provided**)
- S. Little's law (will be part of the course on 2.12.)
- T. Break Even Point analysis (**if provided**)

Theory Questions (resources A-S):

Structure of the theory question:

***Comment:** Indicative questions, written below in italics, are only **ancillary issues!**
It is assumed that Your answers might be more involved! **OM=Operation Management.***

Number	Description:	Resource (slides if required)
1.	Name key OM activities and use of OM: A	
2.	Name critical skills which should be part of the OM knowledge portfolio: A	
3.	What is a Deming cycle? What is supposed to be the main task to improve company processes? : A	
4.	The evaluation of the project result (you can use your project from seminar work and related risk analysis). How can we know that the project was successful? Consider time, due date, capacities of resources, budgets limits, required knowledge portfolio, and project changes: A, B, and C	
5.	Reserve clause (not used so far)	
6.	Specify the basic concept of the Theory of Constraints: B and C <i>Very complex question! It covers, among other questions 7,8,9, and also 10.</i>	
7.	TOC metrics: B <i>Name three main metrics and their trends, and explain the benefits of using these metrics. How to calculate NET Profit and ROI by using these metrics?</i>	
8.	Cost World and Throughput World: B <i>Define and explain differences between Cost World and Throughput World</i>	
9.	TOC five steps: B	
10.	Drum-Buffer-Rope (explain only main principles): L	
11.	Primary trees (Thinking process tools) – Current Reality Tree, Evaporating Cloud Tree, and Future Reality Tree: B <i>Explain the primary use and how these trees are constructed. This question is more and less also related to your seminar work!</i>	
12.	What is bad multitasking?: C	
13.	Critical path and Critical Chain differences: C <i>Specify differences between CP (Critical Path and CC (Critical chain)!</i>	
14.	Use of project buffer (buffer management concept and graph with three zones): C <i>Specify the use of buffers, and how the size of the buffer is set.</i>	
15.	Total Quality Management Basics: K (only if provided)	
16.	Ishikawa fishbone diagram: E	
17.	Boston matrix and Product Life Cycle (PLC). State some examples of PLC: D (only if provided)	
18.	Pareto analysis and its applications (use of PWP presentation Ishikawa allowed): E –You can the show already created PARETO example in BC (see PWP related to CRM) (only if provided)	
19.	OLAP (Business Intelligence): H (only if provided) <i>Basic principles and use of using BI (Business Intelligence). What is the N-dimension cube?</i>	
20.	Basic principles of Kepner –Tregoe method supporting decision making: J <i>Must-to-have and Nice-to-have criteria and their use, principles of questions WHO, WHEN, WHERE, and EXTENT and Why to distinguish between It Is, and It Is Not.</i>	
21.	Magic Gartner Quadrant Matrix: I (only if provided)	

22. Balanced Scorecard (BSC) basic principles and use. What is **KPI**? Name all four sections of BCS: **O**
23. The primary use of Linear programming: **Q** (*Target function and constraints. Reason for using Solver Explain by use of PWP. You can use related Excel file LP Solve with detailed explanation*)
24. Basic rules of Yield management: **R (only if provided)** Processes where revenue management methodology can be used, Show and No-show, Overbooking principles, Cu – under-estimated and Co – over-estimated, calculations – presented examples in PWP can be used during the exam
25. Little's law formulation and use: **S**
26. Break Even Point basics : **(only if provided T**
27. Product mixtures (explain these approaches from related PWP from Study material- you must open these files during testing-exam). Names of the files : Product mixture I and II
28. Yield Management : **R (only if provided)**

Reality 2024 winter term

MS Dynamics 365 Business Central 2024-2025					
Week	Session	Day	Date	Type	Description
1		Monday	23.09.2024	OM	OM Introduction Quo Vadis
1		Wednesday	25.09.2024	BC	BC- 1 Access and Basics & BC- 2 This is Business Central
2		Monday	30.9.2024	OM	TOC I
2		Wednesday	02.10.2024	BC	BC-4 Complement to BC 3-1
3		Monday	07.10.2024	OM	TOC II till the end of the show
3		Wednesday	09.10.2024	BC	BC-4 Selling and Purchase + Transfers I
4		Monday	14.10.2024	OM	CCPM I
4		Wednesday	16.10.2024	BC	BC-6 Discounts (Sales Price Lists)
5		Monday	21.10.2024	OM	CPM II, (Ishikawa + 5 Whys)-1st part
5		Wednesday	23.10.2024	BC	General Ledger Journal (Payables, Receivables a Reversal)
		Monday	04.11.2024	OM	Reading week
		Wednesday	06.11.2024	BC	Reading week
6		Wednesday	30.10.2024	BC	(Ishikawa+ 5 whys)-2nd part Seminar Work Ass and Financial reporting 1st part
7		Monday	11.11.2024	OM	Product mix I and II
7		Wednesday	13.11.2024	BC	Financial report 2nd part
8		Monday	18.11.2024	OM	Kepner-Tregoe & Drum-Buffer-Rope
8		Wednesday	20.11.2024	BC	Budgets in Business Central
9		Monday	25.11.2024	OM	Balanced Scorecard
9		Wednesday	27.11.2024	BC	Dimenions and Sales Analysis by Dimensions
10		Monday	02.12.2024	OM	Little´s Law a 4 prezentations
10		Wednesday	04.12.2024	BC	Contact card, Pareto and Questionaires
11		Monday	09.12.2024	OM	Linear progamming + 6 prezentations
11		Wednesday	11.12.2024	BC	Opportunity and Sales Cycle
12		Monday	16.12.2024	OM +BC	
12		Wednesday	18.12.2024	OM +BC	
12		Friday	20.12.2024	OM +BC	