UNIVERSITATEA BABEŞ-BOLYAI
BABEŞ-BOLYAI TUDOMÁNYEGYETEM
BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

FACULTATEA DE BUSINESS IN PARTNERSHIP
Facultatea de Business

Str. Horea nr.7
Cluj-Napoca, 400174
Tel.: 0264599170
Fax: 0264590110
E-mail: secretariat.tbs@ubbcluj.ro
Site: tbs.ubbcluj.ro

SYLLABUS

Decision Support Systems for supply chain management

Academic year 2025-2026

1. Information regarding the programme

1.1. Higher education institution	Babeş-Bolyai University
1.2. Faculty	Business
1.3. Department	Hospitality Services
1.4. Field of study	Business Administration
1.5. Study cycle	Master
1.6. Study programme/Qualification	Procurement and Supply chain management
1.7. Form of education	Full time

2. Information regarding the discipline

2.1. Name of the discipline		Decision Support Systems for supply chain management				Discipline code	IME0087
2.2. Course coordinator		Conf. dr. Rus Rozalia Veronica					
2.3. Seminar coordinator		Conf. dr. Rus Rozalia Veronica					
2.4. Year of study	1	2.5. Semester	2	2.6. Type of evaluation	E	2.7. Discipline regime	Mandatory

3. Total estimated time (hours/semester of didactic activities)

3.1. Hours per week	**4**	of which: 3.2 course	**2**	3.3 laboratory (work-based learning)	**2**
3.4. Total hours in the curriculum	56	of which: 3.5 course	28	3.6 laboratory (work-based learning)	**28**
Time allotment for individual study (ID) and self-study activities (SA)					**hours**
Learning using manual, course support, bibliography, course notes (SA)					25
Additional documentation (in libraries, on electronic platforms, field documentation)					15
Preparation for seminars/labs, homework, papers, portfolios and essays					48
Tutorship					2
Evaluations					2
Other activities:					2
3.7. Total individual study hours	**94**				
3.8. Total hours per semester	**150**				
3.9. Number of ECTS credits	**6 (3 IP+IM)**				

4. Prerequisites (if necessary)

4.1. curriculum	
4.2. competencies	

Str. Horea nr.7
Cluj-Napoca, 400174
Tel.: 0264599170
Fax: 0264590110
E-mail: secretariat.tbs@ubbcluj.ro
Site: tbs.ubbcluj.ro

5. Conditions (if necessary)

5.1. for the course	Room equipped with video-projector, computer
5.2. for the seminar /lab activities	Room equipped with video-projector, computer

6. Specific competencies acquired

Professional/essential competencies	- create freight rate databases - perform system analysis - use methods of logistical data analysis - use specific data analysis software - consider economic criteria in decision making - use spreadsheets software - maintain logistics databases - perform data analysis - analyse production processes for improvement - provide cost benefit analysis reports
Transversal competencies	- think analytically - think critically

7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	• Understand the need for computerized support in managerial decision making. • Learn concepts and practices currently used in Decision Support Systems for supply chain management. • Understand the development of systems for providing decision-making support.
7.2 Specific objective of the discipline	• the importance of digital transformation • identifying the factors influencing digital transformation • using BI solutions to visualize and analyze business data; • identifying the IT systems that can be used to assist decision making in different situations; • creating dashboards for data analysis

8. Content

8.1 Course	Teaching methods	Remarks
1. Definition and importance of digital competences in organizations	Interactive lecture, discussions, explanation	1 course
2. Digital transformation and its impact on the workplace	Interactive lecture, concrete examples from business environment presented/ discussed/ analyzed	1 course
3. Adaptability to new technologies and digital trends	Interactive lecture, discussions, explanation	1 course
4. What ERP (Enterprise Resource Planning) systems are and how they work	Interactive lecture, discussions, explanation	1 course

Str. Horea nr.7
Cluj-Napoca, 400174
Tel.: 0264599170
Fax: 0264590110
E-mail: secretariat.tbs@ubbcluj.ro
Site: tbs.ubbcluj.ro

5. Integrating ERP with other systems (CRM, WMS, TMS)	Interactive lecture, discussions, explanation	1 course
6. The role of Big Data and Business Intelligence in decision making	Interactive lecture, discussions, applications, step-by-step training	1 course
7. Using tools for data analysis (Power BI, Tableau)	Interactive lecture, discussions, applications, step-by-step training	3 courses
8. Data collection, data validation and cleansing, data modeling, KPI.	Interactive lecture, discussions, applications, step-by-step training	1 course
9. Use of AI -prompt engineering	Interactive lecture, discussions, applications, step-by-step training	1 course
10. Cyber Security	Interactive lecture, discussions, applications, step-by-step training	1 course
11. Using Microsoft Excel to create decision support systems	Interactive lecture, discussions, applications, step-by-step training	2 courses

Bibliography

1. Baltzan, Paige (2021). Business driven information systems. Seventh Edition.McGraw-Hill.
2. Bulusu, L., & Abellera, R. (2020). AI meets BI: artificial intelligence and business intelligence. CRC PressLarsen,
3. Few, S. (2006). Information dashboard design: The effective visual communication of data. O'Reilly Media, Inc.
4. K. R., & Becker, D. S. (2021). Automated machine learning for business. Oxford University Press.
5. Kroenke, D. M., & Boyle, R. (2018). *Using Mis*. Thenth edition, Pearson.
6. Maheshwari, A. (2019). Digital transformation: Building intelligent enterprises. John Wiley & Sons.
7. Sharda, R., Delen, D., & Turban, E. (2021). Analytics, data science, & artificial intelligence: Systems for decision support. Harlow: Pearson.
8. Turban, E., Pollard, C., & Wood, G. (2021). Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability. John Wiley & Sons.
9. Winston, W. (2019), Microsoft Excel 2019 Data Analysis and Business Modeling, Ed. Microsoft Press.

8.2 Seminar / laboratory	Teaching methods	Remarks
1. Definition and importance of digital competences in organizations	Exercises - learning by doing	The laboratories will take place at the economic operator(s)
2. Digital transformation and its impact on the workplace	Exercises - learning by doing	
3. Adaptability to new technologies and digital trends	Exercises - learning by doing	
4. What ERP (Enterprise Resource Planning) systems are and how they work	Exercises - learning by doing	
5. Integrating ERP with other systems (CRM, WMS, TMS)	Exercises - learning by doing	
6. The role of Big Data and Business Intelligence in decision making	Exercises - learning by doing	
7. Using tools for data analysis (Power BI, Tableau)	Exercises - learning by doing	
8. Data collection, data validation and cleansing, data modeling, KPI.	Exercises - learning by doing	
9. Use of AI -prompt engineering	Exercises - learning by doing	
10. Cyber Security	Exercises - learning by doing	
11. Using Microsoft Excel to create decision support systems	Exercises - learning by doing	

Bibliography

1. Baltzan, Paige (2021). Business driven information systems. Seventh Edition.McGraw-Hill.
2. Bulusu, L., & Abellera, R. (2020). AI meets BI: artificial intelligence and business intelligence. CRC PressLarsen,
3. Few, S. (2006). Information dashboard design: The effective visual communication of data. O'Reilly Media, Inc.
4. K. R., & Becker, D. S. (2021). Automated machine learning for business. Oxford University Press.
5. Kroenke, D. M., & Boyle, R. (2018). *Using Mis*. Thenth edition, Pearson.

Str. Horea nr.7
Cluj-Napoca, 400174
Tel.: 0264599170
Fax: 0264590110
E-mail: secretariat.tbs@ubbcluj.ro
Site: tbs.ubbcluj.ro

6. Maheshwari, A. (2019). Digital transformation: Building intelligent enterprises. John Wiley & Sons.
7. Sharda, R., Delen, D., & Turban, E. (2021). Analytics, data science, & artificial intelligence: Systems for decision support. Harlow: Pearson.
8. Turban, E., Pollard, C., & Wood, G. (2021). Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability. John Wiley & Sons.
Winston, W. (2019), Microsoft Excel 2019 Data Analysis and Business Modeling, Ed. Microsoft Press.

9. Corroborating the content of the course with the expectations of the epistemic community, professional associations and representative employers within the field of the program

- The discipline content is consistent with what is being taught in other universities at home and abroad. In order to adapt it to the labour market requirements, there were held meetings with business representatives.

10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of final grade
10.4 Course	- accuracy and completeness of knowledge; - specialized language; - understanding of the theoretical concepts related to decision support information systems for supply chain management	Final evaluation: multiple choice test	**50 %**
10.5 Seminar/laboratory	ability to put into practice the learnt notions	Practical assignments	**50%**
10.6 Minimum standard of performance			
- knowledge of fundamental concepts and their application; - efficient use of BI systems - advanced use of Microsoft Excel			

11. Labels ODD (Sustainable Development Goals)

Date:
25.02.2025

Signature of course coordinator

Assoc.prof. Rus Rozalia Veronica, PhD

Signature of seminar coordinator

Assoc.prof. Rus Rozalia Veronica, PhD

Date of approval:
27.02.2025

Signature of the head of department

Assoc.prof. Marius Bota, PhD