



COURSE DESCRIPTION

Tourism Information Systems

Academic year 2026-2027

1. Programme-related data

1.1. Higher Education Institution	Babeș-Bolyai University
1.2. Faculty	Business
1.3. Department	Hospitality Services
1.4. Field	Business Administration
1.5. Level of study	Master
1.6. Degree programme / Qualification	ADMINISTRAREA AFACERILOR ÎN OSPITALITATE ȘI TURISM INTERNATIONAL (cu predare în limba engleză)/ Business Administration in International Hospitality and Tourism /Master
1.7. Form of education	Full time

2. Information regarding the discipline

2.1. Name of the discipline	Sisteme informatice pentru turism (Tourism information systems)			Codul disciplinei	IME0034
2.2. Course coordinator	Assoc. Prof. Rozalia Veronica Rus				
2.3. Seminar coordinator	Assoc. Prof. Rozalia Veronica Rus				
2.4. Year of study	I	2.5. Semester	2	2.6. Type of assessment	Viva voce
2.7. Course status	Compulsory			2.8. Course type	Core subject

3. Total estimated time (hours per semester of teaching activities)

3.1. Number of hours per week	3	of which: 3.2. course	2	3.3. seminar/ laboratory/ project	1
3.4. Total of hours in the curriculum	42	of which: 3.5. course	28	3.6. seminar/ laboratory	14
Time allocation for individual study (IS) and self-taught activities (ST)					hours
Learning from textbooks, course materials, bibliography, and notes (IS)					28
Additional research in the library, on subject-specific electronic platforms, and on-site					20
Preparing seminars/ laboratories/ projects, assignments, reports, portfolios, and essays					48
Tutoring (professional guidance)					2
Examinations					4
Other activities					6
3.7. Total hours of individual study (IS) and self-taught activities (ST)				108	
3.8. Total hours per semester				150	
3.9. Number of credits				6	

4. Prerequisites (where applicable)

4.1. curriculum-related	
4.2. skills-related	

5. Specific conditions (where applicable)

5.1. course-related	The course will be held in the IT laboratory. Students need a Microsoft institutional account, Microsoft Teams application, computer, Internet connection, Microsoft Office 365, access to Oracle Hospitality OPERA, Protel, eXpresSoft
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	Check, eXpresSoft Master), eXpresSoft myBusiness, Breeze, KeepApp, Power BI Desktop, and Power BI app.
5.2. seminar/laboratory-related	Internet access, software, Microsoft Office (Excel), Oracle Hospitality OPERA, Protel, eXpresSoft Check, eXpresSoft Master, eXpresSoft myBusiness, POS for Restaurant, Breeze, KeepApp, Power BI Desktop and, Power BI app.

6.1. Competencies resulting from the completion of the degree programme

Professional competencies	
Competency code	Competency
PC4	Drawing up decision-based strategies/ alternatives specific to hospitality/ tourism units by means of modern information technology tools
PC5	Drawing up various reports/ studies useful for the running of a hospitality/ tourism unit and the provision of consultancy in the field
Transversal competencies	
Competency code	Competency
TC2	Identification of roles and responsibilities in a team and their implementation within various hospitality and tourism-based businesses

6.2. Learning outcomes relevant to the degree programme

Learning outcomes targeted by the subject		
Competency code	Knowledge and comprehension	Specific academic skills
PC4	The student/graduate explains the concepts, components, and types of information systems used in tourism. The student/graduate interprets the role of information technologies and information systems in optimizing operational and decision-making processes in hospitality and tourism.	The student/graduate applies specialized software solutions to manage reservations, orders, and managerial reporting. The student/graduate develops and presents analyses and reports using information systems to support decision-making in tourism and hospitality.
PC5		
TC2		

7. Subject-specific learning outcomes

Knowledge and understanding
1. The student/graduate explains the concepts, components, architecture, and life cycle of information systems used in tourism, identifying the role of information technologies in supporting operational and managerial processes within hospitality and tourism organizations
2. The student/graduate analyses the characteristics and functionalities of hospitality information systems, including Property Management Systems (PMS), Restaurant Management Systems, Customer Relationship Management (CRM) systems, Event Management Systems.
3. The student/graduate explains the principles and applications of Decision Support Systems, Executive Information Systems, Business Intelligence, Data Analytics, and Artificial Intelligence in tourism, understanding their contribution to organizational performance and decision-making.
4. The student/graduate evaluates the impact of information and communication technologies on different sectors of the tourism industry, including accommodation, food services, transportation, events management, and tourist experiences.
Specific academic skills
1. The student/graduate uses specialized software solutions, including Oracle Hospitality OPERA, Protel, and other hospitality management applications, to manage individual and group reservations, customer records, check-in/check-out procedures, payments, etc.
2. The student/graduate uses restaurant and event management software solutions to manage sales, restaurant services, events, and customer interactions, generating reports required for operational and managerial decision-making.

3.	The student/graduate develops spreadsheet-based decision support solutions using Microsoft Excel, applying optimization techniques, What-If analysis, Goal Seek, and other analytical tools to solve tourism and hospitality management problems.
4.	The student/graduate uses Business Intelligence and data analytics tools, including Power BI, to analyse, visualize, interpret, and communicate tourism-related data to support managerial decision-making process.

8. Contents

8.1. Course	Teaching and learning methods	Remarks
Information Systems – Introduction (Information system's definitions, Types of information systems in Tourism). The components of Information Systems in Tourism. Information system design (Hardware, Software, Human resources, Data, Procedures. Information system life cycle, Information systems development methodologies, System Development Life Cycle)	Interactive lecture, multimedia (video projector), discussion	1 course
New Information and Communication Technologies in Tourism Industry. Artificial Intelligence tools.	Interactive lecture, step-by-step training	1 course
Property Management Systems (Overview of PMS: main characteristics; interfaces with other systems. On-premises vs. cloud-based systems).	Interactive lecture, step-by-step training	1 course
Property Management Systems (User interface. Main features of Oracle Opera and Protel. Individual and group reservation. Advanced search. Client history. Customer Management Systems (CRM)).	Interactive lecture, step-by-step training	2 courses
Property Management Systems (Check-in – Check-out, payments, invoices, rooms management, housekeeping, rate management. Reports. Night audit.)	Interactive lecture, step-by-step training	2 courses
Information systems for Food Service Sector (POS and Restaurant Management Systems. eXpresSoft Check and eXpresSoft Master – characteristics, utilization). Cloud-based solutions for Food Service Sector: eXpresSoft myBusiness, Breeze, KeepApp. SaaS (Software as a service): Breeze Professional and Keep App. Information systems for Events management (Main characteristics and usage: Medallion Banqueting Module).	Interactive lecture, step-by-step training	2 courses
Management information systems in Tourism (Decision support systems; Executive Information Systems; Expert Systems). Spreadsheet based DSS.	Interactive lecture, step-by-step training	1 course
Business Intelligence. Data analytics.	Interactive lecture, step-by-step training	1 course
Transportation and Information Technology (Airline Reservation Systems, Revenue Management Systems, Geographic Information System (GIS), Intelligent Transportation Systems)	Interactive lecture, step-by-step training	1 course

Tourist Experiences and Information Technology	Interactive lecture, step-by-step training	1 course
Bibliography		
1. Benckendorff, Pierre J., Zheng Xiang, and Pauline J. Sheldon (2019). Tourism information technology, 3rd edition. Cabi. 2. Sigala, M., Rahimi, R. and Thelwall Mike (2019), Big Data and Innovation in tourism, travel and hospitality: managerial approaches, techniques and applications, Springer. 3. Bélanger F., Van Slyke, C., Clossler, R. E. (2016), Information Systems for Business, An Experiential Approach, Prospect Press. 4. Collins, G. R., Cobanoglu, C., (2013), Hospitality Information Technology: learn how to use it, Kendall Hunt Pub. 5. Nyheim, Peter, and Daniel Connolly (2011), Technology strategies for the hospitality industry, Prentice Hall Press. 6. Tesone, D. V., (2006) Hospitality Information Systems and E-Commerce, John Wiley&Sons, New Jersey. 7. Turban, Efraim, Carol Pollard, and Gregory Wood (2021). Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability. John Wiley & Sons. 8. ***, eXpresSoft Check user guide. 9. ***, eXpresSoft Master user guide. 10. ***, Opera user guide. 11. ***, eXpresSoft myBusiness user guide 12. ***, Protel user guide.		
8.2. Seminar/ laboratory	Teaching and learning methods	Remarks
Information Systems – Introduction	step-by-step training, didactic exercise, case studies.	1 laboratory
New Information and Communication Technologies in Tourism Industry. Artificial Intelligence tools – Power automate.	step-by-step training, didactic exercise, case studies.	1 laboratory
Property Management Systems	step-by-step training, didactic exercise	5 laboratories
Information systems for Food Service Sector. Information systems for Events management.	step-by-step training, didactic exercise	2 laboratories
Developing Spreadsheet-based DSS in Excel. Optimization and Linear programming. Solving problems related to: Determining Product Mix, Employee Scheduling Problem, Transport problem. Goal Seek. What-If.	step-by-step training, didactic exercise	1 laboratory
Business Intelligence. Data analytics. Power BI Desktop and, Power BI app.	step-by-step training, didactic exercise	1 laboratory
Transportation and Information Technology	step-by-step training, didactic exercise	1 laboratory
Tourist Experiences and Information Technology	step-by-step training, didactic exercise	1 laboratory
Bibliography		
1 Benckendorff, P.J., Sheldon, P.J., Fesenmaie, D. R. (2014), Tourism Information Technology, CABI. 2 Benckendorff, Pierre J., Zheng Xiang, and Pauline J. Sheldon (2019). Tourism information technology, 3rd edition. Cabi. 3 Sigala, M., Rahimi, R. and Thelwall Mike (2019), Big Data and Innovation in tourism, travel and hospitality: managerial approaches, techniques and applications, Springer. 4 Bélanger F., Van Slyke, C., Clossler, R. E. (2016), Information Systems for Business, An Experiential Approach, Prospect Press. 5 Collins, G. R., Cobanoglu, C., (2008), Hospitality Information Technology: learn how to use it, Kendall Hunt Pub. 6 Nyheim, Peter D., McFadden, Francis M., Connolly, D. J. (2005), Technology Strategies for The Hospitality Industry, Pearson Prentice Hall. 7 Tesone, D. V., (2006) Hospitality Information Systems and E-Commerce, John Wiley&Sons, New Jersey. 8 Turban, Efraim, Carol Pollard, and Gregory Wood (2021). Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability. John Wiley & Sons.		

- 9 ***, eXpresSoft Check and eXpresSoft Master user guide.
 10 ***, Opera user guide.
 11 ***, eXpresSoft myBusiness user guide.
 ***, Protel user guide

9. Evaluation

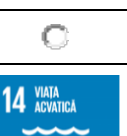
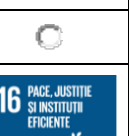
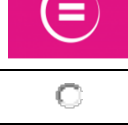
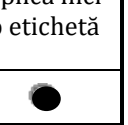
- The same evaluation criteria are maintained for all exams sessions. The components of the evaluation process carried out during the semester cannot be recovered/redone in the examination sessions.
- To be able to accumulate the points obtained during the semester, it is mandatory to obtain a minimum of 5 (five) in the final exam (written/oral).

Type of activity	9.1 Evaluation criteria	9.2 Evaluation methods	9.3 Percentage in the final grade
9.4. Course	• understanding the concepts, components, architecture, and applications of Tourism Information Systems; • knowledge of Property Management Systems, Restaurant Management Systems, CRM, Event Management Systems, Decision Support Systems, Business Intelligence, and emerging ICT technologies in tourism; • ability to explain the role of information systems in operational and managerial decision-making. • ability to analyse tourism information systems, evaluate ICT solutions used in hospitality and tourism, and discuss the impact of information technologies on accommodation, food service, transportation, events management, and tourist experiences.	Final evaluation: Multiple choice test - theory	40 %
9.5. Seminar/ laboratory	• effective use of specialized software applications (Oracle Hospitality OPERA, Protel, eXpresSoft Check, eXpresSoft Master, eXpresSoft myBusiness, Breeze, KeepApp); • management of reservations, customer records, check-in/check-out procedures, restaurant operations, reporting, and event management. • development of spreadsheet-based decision support solutions, application of Excel analytical tools (What-If Analysis, Goal Seek, optimization), • use of Power BI for data analysis and visualization	• First assignment - Property Management Systems, team assignment - 25% • Second assignment - Restaurant Management Systems, team assignment - 15% • Third assignment - Decision Support Systems/Business Intelligence - team assignment - 20% The assignments will be sent at deadlines, during the semester. You must hand in at list 1 assignment. 1 team should not have more than 3 members.	60 %

9.6 Minimum standard for passing

- Basic knowledge of theory and ability to use all the software solutions studied

10. SDG labels (Sustainable Development Goals)¹

	 Sustainable Development Generic Label							
								
								Nu se aplică nici o etichetă
								

Date of entry:

22.05.26

Signature of course coordinator

Assoc. Prof. Rozalia Veronica Rus

Signature of seminar coordinator

Assoc. Prof. Rozalia Veronica Rus

Date of approval in the department:

27.05.26

Signature of the head of department

Assoc. Prof. Marius BOTA, PhD

¹ Select a single label which, according to the [Implementation of SDG labels in the academic process](#), best matches the subject. If the subject addresses sustainable development in a generic manner (i.e. by presenting/introducing the general framework of sustainable development, etc.), then the Sustainable Development generic label may be applied. If none of the labels describe the subject, select the last option: "No label applies."