



COURSE DESCRIPTION

1. GENERAL

GENERAL			
SCHOOL	ECONOMIC SCIENCES		
DEPARTMENT	TOURISM		
LEVEL	Undergraduate		
COURSE CODE	INF200	SEMESTER	8 th
COURSE TITLE	Artificial Intelligence Applications in Tourism		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	ECTS
		4	5
COURSE CATEGORY	Skills Development		
COURSE TYPE	Elective		
PREREQUISITES	-		
LANGUAGE OF TEACHING AND EXAMINATIONS	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (In English)		
URL	https://tourism.ionio.gr/en/undergraduate-studies/courses/1750/		
ECLASS			

2. TEACHING RESULTS

Teaching Results
Course purpose The purpose of the course is for students of the Department of Tourism to acquire applied knowledge of the possibilities, uses and challenges of Artificial Intelligence in contemporary tourism. The course does not aim to train students in algorithm development techniques, but to cultivate their ability to make strategic use of AI in tourism environments. Students will learn to design simple AI use scenarios for tourism businesses and destinations, evaluate AI tools, understand the data required for their operation and propose solutions that improve the visitor experience, business efficiency and the sustainable management of tourism flows.
Learning outcomes Upon completion of the course, students are expected to be able to:
Knowledge • Describe the main categories of AI applications in tourism, such as chatbots, recommender systems, dynamic pricing, sentiment analysis, demand forecasting, smart destination platforms and generative AI. • Understand how AI uses data from online reviews, bookings, social media, mobile devices, sensors, CRM systems, booking platforms and destination data. • Recognise contemporary AI applications in hotels, travel agencies, air transport, DMOs, cultural sites, food services, visitor experiences and sustainable tourism management.
Skills • Design simple AI use scenarios for tourism businesses and destinations. • Use generative AI tools for tourism content, personalised recommendations, travel experience design and analysis of visitor comments. • Interpret the results of basic AI applications, such as sentiment analysis, review classification, demand



- forecasting and the creation of personalised recommendations.
- Evaluate the suitability of different AI tools for specific tourism management problems.

Competences

- Propose integrated AI solutions based on the needs of a tourism business or destination.
- Consider issues of data quality, transparency, trust, privacy and responsible AI use.
- Connect AI with strategic tourism objectives, such as experience improvement, competitiveness, sustainability and destination resilience.

General Skills

3. CONTENT

The course examines how Artificial Intelligence transforms tourism, hospitality and destination management. Unlike a general introductory course on AI, this course focuses on practical, operational and strategic applications of AI in the tourism sector: intelligent recommender systems, conversational AI and tourism chatbots, generation of personalised content, dynamic pricing, revenue management, analysis of online reviews, demand forecasting, intelligent management of visitor flows, smart destinations, robotics in hospitality, augmented and virtual reality, digital assistants and autonomous AI agents.

The course combines theoretical understanding, case studies and laboratory activities with contemporary AI tools. Emphasis is placed on students' ability to identify where, when and why AI can be used in tourism businesses, destination management organisations, hotels, travel agencies, cultural institutions and public tourism organisations.

The international literature presents AI as a technology that supports the personalisation of experiences, the improvement of operational efficiency, the automation of services and the intelligent management of tourism resources. Recent reviews refer to applications such as intelligent forecasting, revenue management, service robots, hyper-personalised travel experiences and AI-driven analytics for sustainability and operational decision-making. At the same time, organisations such as UN Tourism highlight AI as a critical field of innovation for the tourism sector, with dedicated actions and reports on the adoption of AI in tourism.

Week	Thematic unit	Applied activity
1	AI and the transformation of tourism	Mapping AI applications in tourism
2	Tourism data and AI ecosystems	Identifying data sources for a tourism business
3	Conversational AI and chatbots	Designing a dialogue flow for a tourism chatbot
4	Intelligent recommendation systems	Creating a personalised recommendation scenario
5	Generative AI for tourism marketing	Producing a destination campaign with AI
6	Analysis of online reviews	Extracting topics and sentiment from reviews
7	Demand forecasting and dynamic pricing	Case study on occupancy and prices
8	Smart destinations and visitor flows	Designing an AI dashboard for a DMO
9	Robotics and smart hospitality	Evaluating a service robot use case
10	AR/VR, cultural tourism and AI storytelling	Designing a digital visit experience
11	AI agents and travel planning	AI travel agent scenario
12	Responsible AI in tourism	Assessing the risks of a tourism application
13	Final project presentations	Presentation and feedback

4. TEACHING AND LEARNING METHODS - EVALUATION

TEACHING METHOD	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	• Use of presentations and audiovisual material in teaching. • Live demonstrations of contemporary Artificial Intelligence tools in class. • Support of the learning process through the Institution's electronic platform (e-class / openeclass). • Communication with students via email and the course platform.
TEACHING STRUCTURE	



EVALUATION OF STUDENTS

Language of assessment: Greek.

Final written examination or equivalent individual applied assignment: 40%

Understanding of basic concepts, interpretation of AI applications, connection between theory and tourism use cases.

Group project designing an AI application in tourism: 40%
Quality of problem definition, documentation of data, selection of tools, business logic, responsible use of AI, clarity of proposal.

Laboratory exercises and interim deliverables: 20%
Participation, completeness of deliverables, practical application of tools, critical evaluation of results.

5. BIBLIOGRAPHY

Basic textbook / main course material

- Zopounidis, C., Zopounidis, D., & Kostis, A. Artificial Intelligence and Applications in Management. [Recommended textbook]. Special use of sections on AI definitions and processes, algorithms, machine learning, Big Data, innovation, skills, SMEs, marketing, human resources and the aviation sector.

Indicative supplementary bibliography and material

- UN Tourism. Reports and thematic material on innovation, digital transition and the use of AI in tourism.
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. Smart tourism: Foundations and developments in ICT-enabled tourism.
- Buhalis, D., & Moldavska, I. Voice assistants, artificial intelligence and service automation in tourism and hospitality.
- Ivanov, S., & Webster, C. Robots, artificial intelligence, and service automation in travel, tourism and hospitality.
- Contemporary scientific articles and case studies on AI-driven personalization, recommender systems, dynamic pricing, sentiment analysis, demand forecasting, smart destinations, service robots and responsible AI in tourism.