

# **Course in Artificial Intelligence in the Hotel Industry**

## **Course Structure – 30 ECTS (~750 hours)**

### **Module 1 – Fundamentals of Artificial Intelligence**

- Introduction to AI: key concepts and definitions.
- Machine learning, deep learning, NLP.
- Cross-sector applications in services.

### **Module 2 – AI and Customer Experience**

- Chatbots and virtual assistants.
- Smart CRM and personalized guest management.
- Case studies of digitalized hotels.

### **Module 3 – AI for Revenue Management**

- Dynamic pricing strategies.
- Predictive algorithms for forecasting.
- Online distribution optimization.

### **Module 4 – Big Data and Predictive Analytics**

- Data collection and management.
- Customer behavioral analysis.
- Data visualization tools.

### **Module 5 – Digital Marketing and AI**

- Advanced targeting and automated campaigns.
- Sentiment analysis and online reputation.
- Personalized communication strategies.

### **Module 6 – Robotics and Service Automation**

- Robots in front office and housekeeping.
- AI in food & beverage operations.
- Operational efficiency and cost reduction.

### **Module 7 – AI in Human Resources**

- Recruitment and talent acquisition.
- Team performance monitoring.

- Personalized training with AI.

#### **Module 8 – Ethics, Sustainability & Regulation**

- Ethical issues and GDPR compliance.
- Digital sustainability.
- EU guidelines on AI.

#### **Module 9 – Future Trends and Innovation**

- Emerging trends in hospitality AI.
- The hotel of the future.
- Experimental applications.

#### **Final Project Work (174 hours – 9 ECTS)**

- Applied research or business project on AI adoption in hotels.