



Information Systems for Tourism & Hospitality Management (THM- 322)

National University of Sciences & Technology
(NUST)

**BSTHM
2K22**

Course Details:

Course Title: IS for Tourism & Hospitality Management
Course Code: THM- 322
Program: BSTHM2k22

Credit Hours: 3
Pre-requisite: (Code)
Sections: A

Course Description:

This course explores the role of information systems in transforming the tourism and hospitality industry. Students will examine various technologies and software / business intelligence tools. The course also touches upon digital marketing, online travel agencies (OTAs), and emerging trends such as artificial intelligence, big data analytics, and smart tourism. Emphasis is placed on data-driven decision-making, enhancing customer experiences, and ensuring cybersecurity and ethical data practices. Through case studies and hands-on practice with industry-standard software, students will develop the skills needed to leverage technology for innovation and competitive advantage in hospitality and tourism management.

Course Learning Outcomes:

CLO 1: Explain the fundamental concepts of information systems and their role in the tourism and hospitality industry.

CLO 2: Describe various types of information systems used in hospitality.

CLO 3: Analyze the impact of digital transformation, artificial intelligence, and big data analytics on the tourism and hospitality sectors.

CLO 4: Develop strategies for improving guest experiences through smart technologies, and digital marketing.

CLO 5: Assess the ethical and legal considerations related to data privacy, cybersecurity, and digital transactions in tourism and hospitality.

Program Goals & Learning Objectives:

Goals & learning objectives of the BS&THM Program are:

Goal 1: Students will acquire knowledge to apply in real-world contexts

LO 1.1: Students will be able to understand key concepts in the field of Tourism & Hospitality

LO 1.2: Students will be able to apply acquired knowledge to various contexts in the Tourism and Hospitality industry

Goal 2: Students will work in team settings

LO 2.1: Students will be able to work towards achieving team goals

LO 2.2: Students will be able to demonstrate effective team behavior

Goal 3: Students will learn to communicate effectively

LO 3.1: Students will be able to communicate effectively in oral presentations

LO 3.2: Students will be able to create professional reports

Goal 4: Students will deal with the ethical dilemmas that arise in a business environment

LO 4.1: Students will be able to identify ethical concerns emanating from a business situation

LO 4.2: Students will be able to apply ethical guidelines to address business problems by examining a set of alternatives

Mapping - CLOs with LOs

Learning Objective	LO 1.1	LO 1.2	LO 2.1	LO 2.2	LO 3.1	LO 3.2	LO 4.1	LO 4.2	Not mapped	Evaluation Item
CLO 1	✓									End Semester Exam
CLO 2	✓									Quiz
CLO 3		•								Case Study
CLO 4		•								Project
CLO 5								•		Project

Legend indicates: ✓ mapped and assessed CLO • mapped but not assessed CLO x unmapped CLO

Required Course Material:

Textbook (s):

- "Technology Strategies for the Hospitality Industry" – By Peter D. Nyheim & Daniel J. Connolly (Pearson, 2018)
- "Hospitality Information Technology: Learning How to Use It" – By *Galindo, Schrier, and Murphy* (Kendall Hunt, 2020)
- Laudon, K. And Laudon, J. Management Information Systems: Managing the Digital Firm, 16th Edition, Pearson Education
- Pease, W., Rowe, M., & Cooper, M. (Eds.). (2007). Information and communication technologies in support of the tourism industry. Igi Global.
Ali, A., & Frew, A. (2013). Information and communication technologies for sustainable tourism. Routledge.

Other Material:

Harvard Articles/ other reading material will be provided on LMS a week prior to the class

Course Evaluation:

Grading will be done as per NBS criteria. The breakup is as follows:

End Semester Exam	40%
Mid Semester Exam	25%
Simulation- Project	5% 10% for the Project Deliverables + 5% for the final presentation
Quizzes	10%
Lab Work (CP)	5%

Weekly Schedule:

Week	Lecture No. and Topic	Preparation Material	Related CLO
1	<u>Lecture 1:</u> Introduction To IS & Emerging Technologies: Computers, Devices, and the Web. <ul style="list-style-type: none"> • What is Information Technology? • What is an Information System? • Strategic Business Objectives of IS • Dimensions of Information Systems 	Chapter 1 Laudon & Laudon 16 th Edition	CLO 1
	<u>Lecture 2:</u> Organisational Need for IS: Organisation, Strategy & IS <ul style="list-style-type: none"> • What is an Organization? • Processes in a business/ Organization • How IS impact Organizations? 	Chapter 3 Laudon & Laudon 16 th Edition	CLO 1
2	<u>Lecture 3:</u> Types of Business Information Systems: <ul style="list-style-type: none"> • Transaction Processing Systems • Management Information Systems • Decision Support Systems 	Chapter 2 Laudon & Laudon 16 th Edition	CLO 2

	<ul style="list-style-type: none"> Executive Support Systems 		
	<p><u>Lecture 4:</u></p> <p>Identifying Different Stakeholder Needs for Information in Different Settings</p> <p>Student Activity: Stakeholder Mapping Activity</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 1</p>
3	<p><u>Lecture 5:</u></p> <p>Diverse Data Needs of Different Stakeholders for Managerial Decision-making in Same & Different Contexts</p> <p>Class Discussion: Game of Thrones: Tourism in Dubrovnik, Croatia</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 1</p>
	<p><u>Lecture 6:</u></p> <p>Competitive Advantage & Digital Platforms and Marketing</p> <p>Class Discussion: Treks n Rapids: Adventure Tourism in India</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 1</p>
4	<p><u>Lecture 7:</u></p> <p>Business Transformation for Digital Competition</p> <p>Class Discussion: The Michelin Restaurant Guide” Charting a New Course</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 3</p>
	<p><u>Lecture 8:</u></p> <p>Digital Business Model & The Need for Continuous Innovation</p> <p>Class Discussion: Air BnB, Inc.</p>	<p>Harvard Business Publishing</p>	<p>CLO 3</p>

5	<p>Lecture 9:</p> <p><u>Industry Transformation: An External Driver of Change</u></p> <p>Class Discussion: Marriot International: The Next 90 Years</p>	Harvard Business Publishing	CLO 4
	<p>Lecture 10:</p> <p><u>Future of Tourism & Metaverse</u></p> <p>Class Discussion: Metaverse and E- Learning at redBus: Challenges & Benefits</p> <p>QUIZ-1</p>	Harvard Business Publishing	CLO 3
6	<p>Lecture 11:</p> <p><u>Technology Driven Entrepreneurship in Tourism & Hospitality: The Origins</u></p> <p>Class Discussion: EasyJet: The Web's Favourite Airline</p>	Harvard Business Publishing	CLO 4
	<p>Lecture 12:</p> <p><u>Technology Driven Disruption: Curating Customer Segments</u></p> <p>Class Discussion: Linear Air: Creating the Taxi Industry</p>	<i>Harvard Business Publishing</i>	CLO 3
7	<p>Lecture 13:</p> <p><u>Customer Driven Disruption: Predicting Technology Decisions</u></p> <p>Class Discussion: EmQuest: Travel Distribution in the Digital Era</p> <p>QUIZ-2</p>	<i>Harvard Business Publishing</i>	CLO 3

	<p><u>Lecture 14:</u></p> <p><u>Data Analytics in Tourism</u></p> <p>Class Discussion: Travelogo: Understanding Customer Journeys</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 3</p>
8	<p><u>Lecture 15:</u></p> <p><u>E- Commerce: Drawing Lessons for THM SMEs</u></p> <p>Class Discussion (student led/ Group): Eventbrite: Market Sizing, Competitive Analysis and Fundraising- Session I</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 5</p>
	<p><u>Lecture 16:</u></p> <p><u>E- Commerce: Drawing Lessons for THM SMEs</u></p> <p>Class Discussion (student led/ Group): Eventbrite: Market Sizing, Competitive Analysis and Fundraising- Session II</p>	<p>Students will have to complete a task as assigned during the class</p>	<p>CLO 5</p>
9	MID SEMESTER EXAM WEEK		
10	<p><u>Lecture 17:</u></p> <p><u>Hands On Entrepreneurship-Simulation</u></p> <p>Simulation 1: Coffee Shop Inc.</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 3</p>
	<p><u>Lecture 18:</u></p> <p><u>Hands On Entrepreneurship-Simulation</u></p> <p>Simulation 1 ('cont):</p>	<p><i>Harvard Business Publishing</i></p>	<p>CLO 3</p>

11	<p><u>Lecture 19:</u></p> <p>Module 3 (Design of Managerial & Technical Approaches for Modern Day Tourism)</p> <p><u>Data Analytics- Monetizing Journeys while protecting privacy</u></p> <p>Class Discussion: The Indian Railway Catering & Tourism Corporation: The Data Monetisation Tender</p> <p>QUIZ- 3</p>	<i>Harvard Business Publishing</i>	CLO 5
	<p><u>Lecture 20:</u></p> <p><u>Text Mining- Structured & Unstructured Data in Your Business</u></p> <p>Class Discussion: Understanding Text Mining and Sentiment Analysis in Hotel Booking</p>	<i>Harvard Business Publishing</i>	CLO 5
12	<p><u>Lecture 21:</u></p> <p>Lab Work- Software Applications/ Suite</p>	Instructor notes and class exercises	CLO 2
	<p><u>Lecture 22:</u></p> <p>Lab Work- Software Applications/ Suite</p>	Instructor notes and class exercises	CLO 2
13	<p><u>Lecture 23:</u></p> <p>Lab Work- Software Applications/ Suite</p>	Instructor notes and class exercises	CLO 2

	<u>Lecture 24:</u> Lab Work- Software Applications/ Suite	Instructor notes and class exercises	CLO 2
14	<u>Lecture 25:</u> Lab Work- Software Applications/ Suite OR Guest Lecture- Food Panda- Location Based Services & Much More	Instructor notes and class exercises	CLO 2
	<u>Lecture 25:</u> Lab Work- Software Applications/ Suite OR Industry Visit: TBD	Instructor notes and class exercises	CLO 2
15	<u>Lecture 27 & 28:</u> Presentations- 1 & 2		
16	<u>Lecture 29 & 30</u> Presentations 3 & 4		
17	BUFFER WEEK		
18	END SEMESTER EXAM WEEK		

Details of Assessments:

Quizzes

1. Quiz-1 in Week-5
2. Quiz-2 in Week-7
3. Quiz-3 in Week-11

Project

Student Groups are required to analyse and propose an innovative IS solution that can/ may enhance customer experience, operational efficiency, business process improvement, data driven decision making in an organization.

For undertaking the project, following components must be covered

- a. **Deliverable 1:** Industry & Business Analysis: Select a tourism/ hospitality business and analyse its operations. Identify key challenges and gaps in the existing IS
- b. **Deliverable 2:** Technology application/ use in a similar business in a different national setting. Identify the application of existing and emerging technologies in sufficient detail.
- c. **Deliverable 3:** Propose an IS solution, keeping in view the local challenges i.e. workforce readiness, infrastructure etc.

- d. **Deliverable 4:** Propose an implementation roadmap along with brief on ethical, legal or other organisational challenges
- e. **Final Presentations** will take place in the last two sessions of the semester. Each Deliverable is expected in the form of a report every fortnight with the first expected in the 6th Week (Friday Class)

AoL Assessment:

In this course LO 1.1 will be reinforced. Students will be assessed on the learning outcome through a Quiz which will be administered on individual basis.

Course Policies:

Attendance:

- The school policy of 75 percent attendance applies to this course. **YOU SIMPLY CANNOT PASS THIS COURSE WITHOUT GOOD ATTENDANCE.**
- In the event of a missed session, it is the student's responsibility to consult LMS and their classmates for missed content.
- Class attendance will be taken at any point of time in the class. Do not be late for class otherwise you will be marked **absent** for the session(s).
- It is the student's responsibility to continuously monitor his/her attendance. **Do Not ask the instructor to change/modify the attendance** unless there has been an accidental oversight. In such an event, the student should inform the instructor of the error (with proof) **before** the month ends.

Discipline / Deadline Extension Policy:

Students are intimated in advance that there is no room for deadline extensions in this module for individual as well as for group activities/ submissions. The sole reason for this is the provision of similar grounds to each Student. Therefore do not ask for any such favours. Prove yourself as educated, well groomed individual during your stay.

Class Participation:

Students are encouraged to participate and present their own ideas/views during the module in a respectable manner. Remember that there is no right or wrong answer, so try to share your perspective freely and confidently. However always remember that speak only when you be given a turn, always raise your hand before speaking to grab audience attention.

Examination:

The course will have two exams to measure student understanding of the subject, mid semester in the 9th and end semester in the 18th week of the course. Students are required to present their arguments in a systematic and well-balanced approach. Use of headings will be highly appreciated. The students are encouraged to read and reference from a variety of material to present a thorough understanding of the module.

Academic Integrity:

Students are required *not to indulge in plagiarism and dishonesty* which will be dealt strictly in accordance with the plagiarism policy. Students are free to discuss with their peers and

allowed to study in groups; however, on account of individual submissions, whether be it assignments/ projects, you are required to submit your own reflection on the assigned topic.

Plagiarism and Penalty

- Plagiarism will NOT be tolerated at any stage during this course. Students using any unethical means to progress in this course will be heavily penalized when being graded. The work will be marked as zero. Further actions against them may also be taken according to NUST’s disciplinary policy.
- Similarity index of 19% or above will be considered as plagiarized.
- Please note that using quotes from other reference material is allowed but is not excluded from similarity check
- Similarity of 3% or above with single source will be considered as plagiarism
- Use of AI generated content 20% or above will be considered as plagiarism.
- The plagiarized assignment or project will be marked as zero

Consultation & Contact:

I am available in my office on Monday and Friday but you need to seek appointment through my official email at least a day in advance other than in emergency cases.

Cell Phone Policy:

When cell phones ring and students respond in class or leave class to respond, it disrupts the class. The use by students of cell phones or similar communication devices during scheduled classes is prohibited. All such devices must be turned off. At the discretion of the instructor, exception to this policy is possible, in special circumstances.

Reading Policy:

Students are responsible for coming prepared to class. The required reading material assigned for each class must be prepared before the session as this is necessary for conducting a discussion based interactive session.

Dos and Don'ts:

<i>DO</i>	<i>DO NOT</i>
Come to class <u>on time</u> and having completed the reading material.	Submit assignments, quizzes late. Such assignments and quizzes will not be accepted.
Take notes during the lectures.	<u>Cause disturbance</u> in class.
Research topics and news items for constructive (and respectful) in-class debates.	Eat/Drink food in class.
Let the lecturer know in advance if you need to miss a class.	Ask the lecturer to reschedule deadlines.
Constantly monitor the course outline and have it with you at all times.	<u>Ask the lecturer to change attendance details.</u>
<u>Switch off/Put your phones on silent</u> during class.	<u>Forget to write some form of identification on each document that is due for submission of any kind.</u>
Follow submission instructions for any assessment content	Make up your own format of labelling / submission of assessed material – you will lose marks for this