HFT 4442
Artificial Intelligence Revolutions and Applications in Tourism, Hospitality and Events
(Fall 2021)

COURSE INFORMATION

Credits	3
Meeting location	FLG 0245
Meeting times	M,W,F (4:05 PM - 4:55 PM)

INSTRUCTOR INFORMATION

Dr. Oscar (Hengxuan) Chi
Assistant Professor
Office: FLG 190F
Phone: (352) 294-1651
Email: h.chi@ufl.edu (*preferred*)
Office hours: M, W (1 PM to 3 PM) & by appointment.

Department Chair Rachel Fu, Ph.D., CHE Room FLG 240D
Email: racheljuichifu@ufl.edu

COURSE DESCRIPTION:

A foundational examination of the implications of the artificial intelligence revolution (AI) in the tourism, hospitality, and event industry. Content includes analyses of AI applications in booking, transportation, theme parks, destination and attraction marketing, economic, social, cultural, and environmental impacts, as well as motivators to travel.

COURSE DESCRIPTION:

The goal of this course is to provide a foundation for understanding the emergent perspectives on the linkages between technology, marketing, analytics, and the design of tourism places associated with Artificial Intelligence (AI) and Big Data revolutions. The course presents key components of the transformational changes in relationships among the new technology, traveler behavior, and the travel industry. The critical analysis of tourism systems is particularly focused on creating sustainable, safe, and healthy environments using the latest developments in AI and Data Science. The course encourages students to consider the future of tourism and how the new smart technologies are reshaping it.

PREREQUISITES: Junior or senior standing

READING MATERIALS:

This class will use both assigned textbooks and journal articles posted on Canvas. Please consult the course calendar for weekly reading topics.

Required Book:

- Artificial Intelligence: A Modern Approach, 4th Edition
  Authors: Stuart J. Russell & Peter Norvig (ISBN: 0134610997)

Journal articles from the following sources will be used:

- ✓ Harvard Business Review
- ✓ MIT Technology Review
- ✓ Cornell Hospitality Quarterly
- ✓ Science Robotics Journal
- ✓ Foundations and Trends in Machine Learning

COURSE FORMAT:

Class teaching modality (face-to-face, online, or hyflex) will be determined based on the epidemiological situation and the UF guidelines. Normally, the class will meet two times a week for live lecture for the first four weeks followed by watching lecture videos online and then meet in the classroom for active learning for the rest of the semester. There will be combinations of the above weeks per the instructor's assessment towards students' progress throughout the semester. The course will include a combination of lectures, discussions, activities, case studies, and exams. Active participation is essential to the nature of this course.

COURSE LEARNING OBJECTIVES:

Upon completion of this course students will be able to:

- Define artificial intelligence and describe how its applications are used in travel, tourism, hospitality, and event industries, including booking, transportation, destinations, attractions, theme parks, lodging, resorts, restaurant, and many other components.
- Describe the history and development of the revolutions in AI.
- Describe how AI helps tourists prior to and during their travel.
- Evaluate the contributions of AI adoptions in international tourism.
- Apply learned literature, methods, and skills in research contexts.
- Identify major AI forces that are shaping the future of the tourism, hospitality, and event industries.

COURSE AND UNIVERSITY POLICIES:

ATTENDANCE AND CLASS PARTICIPATION POLICY: Student's attendance and participations will be graded as 10% of their final grade. Please see the grading rubric listed in the GRADING section of this syllabus.

PERSONAL CONDUCT POLICY: Students are expected to exhibit behaviors that reflect highly upon themselves and our University. UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies behaviors that are in violation of this code and the possible sanctions.

Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or teaching Assistant in this class.

MAKE-UP POLICIES FOR MISSED ASSIGNMENTS: A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the Dean of Students Office (www.dso.ufl.edu) and follow the DSO Care Team procedures for documentation and submission of a request for make-up assignment (https://care.dso.ufl.edu/instructor-notifications/). The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency. This is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

ACCOMMODATING STUDENTS WITH DISABILITIES: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting their Get Started page at https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

COURSE EVALUATIONS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

COVID-RELATED INFORMATION:

- We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.
- You are expected to wear approved face coverings at all times during class and within buildings.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

PRIVACY: For online portion of this course with recorded materials:
Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

GETTING HELP:

Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575
- Counseling and Wellness Center: https://counseling.ufl.edu/, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies) http://www.police.ufl.edu/

Academic Resources

- E-learning technical support, 352-392-4357 (select opti on 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. https://career.ufl.edu/
- Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/
- Student Complaints On-Campus: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/ On-Line Students Complaints: http://distance.ufl.edu/student-complaint-process/

GRADING:

Make-up assignments will be considered at the instructor's discretion and only when arrangements have been made prior to the scheduled event. For emergencies, health-related issues, or religious observances, the instructor follows the UF policies specified here: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Student can earn 100 points (100%) in this class:

Undergraduate and Graduate Students (non-thesis)		
Individual Effort (55 points or 55%)	Class attendance and participation	10
	500 word Essays (3 @ 5 pts)	15
	Midterm exam	15
	Final exam	15

	TOTAL POINTS	**55**
Group Effort: Artificial Intelligence in	Project proposal – 1-2 pages	10
THEM Project (45 points or 45%)	Final paper – 10-12 pages	25
	Project class presentation (20 minutes)	10
	TOTAL POINTS	**45**
	GRAND TOTAL POINTS	**100**

Graduate Students (thesis)		
	Class attendance and participation	10
	500 word Essays (3 @ 5 pts)	15
	Research Project proposal (Draft) – 3-6 pages	10
	Research Project proposal (Final version) – 3-6 pages	10
	Final paper (Draft) – 20-30 pages	20
	Final paper (Final version) – 20-30 pages	25
	Research presentation (20 minutes)	10
	GRAND TOTAL POINTS	**100**

It will take one week to 10 days to get grades posted for each assignment. Please contact your instructor in one week after your grade is posted when you feel there is an error in grading. **Your grade will not be rounded.** More detailed information regarding current UF grading policies can be found here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/." Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

GRADING SCALE AND GPA POINTS:

A- = 90.00-92.99% (3.67)	A = 93.00-100% (4.0)		
B- = 80.00-82.99% (2.67)	B = 83.00-86.99% (3.0)	B+ = 87.00-89.99% (3.33)	
C- = 70.00-72.99% (1.67)	C = 73.00-76.99% (2.0)	C+ = 77.00-79.99% (2.33)	
D- = 60.00-62.99% (0.67)	D = 63.00-66.99% (1.0)	D+ = 67.00-69.99% (1.33)	E = 59.99% or lower (0.0). This is a failing grade.

ASSIGNMENTS:

All assignments must be typed. Points will be deducted for spelling, syntax, and grammatical errors. All referencing must be done correctly and accurately.

Class attendance and participation

Students are expected to actively participate in class discussion and show evidence in their contributions that they have done the weekly readings (this means more than simply attending class). Students missing more than three class meetings will have their final grade reduced by one whole letter grade. Requirements for class attendance and make-up exams, assignments, and other work in this course are

consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Excellent	10 pts	Defines, describes, and illustrates concepts Explains, assesses and criticizes ideas Demonstrates preparation and reading of assignments
Good	8 pts	Defines, describes, and illustrates concepts Explains, assesses and criticizes ides Evidence of reading assignments, but not fully prepared
Reasonable	6 pts	Defines, describes, and illustrates concepts Explains, assesses, or criticize some ideas Evidence of incomplete reading of assignments and preparation
Basic	4 pts	Defines and describes some concepts Explains but cannot assess and criticize ideas Clearly unprepared and lacking evidence of reading assignments
Bare Minimum	2 pts	Defines and describes some concepts Unable to explain, assess, or criticize ideas Clearly unprepared and lacking evidence of reading assignments
Unacceptable	0 pt	Refuses to engage in discussion or answer questions when asked Engaged into inappropriate behaviors (using cell phone, social media, visiting irrelevant websites) Not present

Exams
Two exams will be held: One at mid-term and the other during the final exam day. The exams will cover the issues discussed in the assigned readings and in class.

Essays
Three 500 word essays will be written addressing various topics discussed in class. Topics will be assigned throughout the semester. In these essays, students are asked to write **500 words** (typewritten, single space, 1-inch margin on all sides, Times New Roman, size 12) discussing the assigned essay topic. Each essay should **include direct reference** to information obtained from class discussions, readings provided in the course, as well as other materials obtained outside of normal class operation. Each essay should summarize these materials and include a personal assessment by the student regarding its "impact – role – relationship" within the tourism system.

Artificial Intelligence Applications

The AI Applications **group project** includes (1) 10-12 page double-spaced paper and (2) a class presentation. Undergraduates will be working with other undergraduate class members**.**

Paper Guidelines

An initial 1-2 page proposal will be submitted by each student group. The proposal will outline AI applications and specific business sector chosen by the students and describe how AI works with the needs and wants of visitors during the process of (1) destination selection; (2) transportation; and (3) activities at the destinations, such as visiting attractions, theme parks, staying at resorts and lodging, restaurant experiences, and participation in events. Once the proposal is approved by the instructor, the undergraduate student group will develop their ideas into a class presentation and a final paper. Both the presentation **and the 10-12 page** paper should include the following sections: (1) study problem statement, (2) current AI development, and (3) potential future applications and expansions, 4. References. The paper may include the following elements:

1. Discussion of variability in needs across populations [X, Y, Z…Generations], types of tourism, hospitality businesses, or events;
2. An analysis of possible applications of artificial intelligence and data science in the selected THEM context;
3. Implications to strategic management of THEM businesses/environments, including an analysis of strengths, weaknesses, opportunities, and threats;
4. Critical analysis of how artificial intelligence may enhance return on investment (ROI), increase the quality of life, affect local communities, and other larger implications of new technologies.

Presentation Guidelines: During the last class (or last 2 classes depending on the number of students enrolled) **each student group will present a 20 minute** presentation communicating the main points from their paper. **Each group should use PowerPoint or a similar program**. Please organize your presentation according to the sections included in your paper ie: (1) study problem statement, (2) current AI development, and (3) potential future applications and expansions. Please make sure that each student in your group speaks. Please also encourage questions and discussion from your classmates.

Group Contract for Group Project

By the third Friday of the semester, students will assigned project groups by the instructor. You will need to meet with your group and discuss, draft and sign the group contract. A copy of this contract can be found on Canvas.

Instructions: Please create a Google Doc drive for your group project. Please upload a copy of this form and as a group answer the following questions that involve making decisions about your group project. When you have all come to an agreement and have signed this contract, please upload it in Canvas by the third Friday of the semester.

When you begin work on your group assignment, please revisit your contract. If you encounter difficulties working as a group, refer to the expectations you agreed upon and if you feel that group members are not living up to these expectations then please talk to them. I am always available as well to discuss such matters.

GRADING EXPECTATIONS FOR ESSAYS AND ARTIFICIAL INTELLIGENCE IN THEM PROJECT PAPER:

90-100%: Excellent. Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, careful formatting.
80-89.99%: Good. Good college-level work that meets requirements. Original, well organized. Good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
70-79.99%: Satisfactory. Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed on depth, originality of thought, structure, and presentation.
60-69.99%: Marginal. Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.
0-59.99%: Failure. Assignment does not meet the requirements/criteria, is not submitted, or incomplete.

GRADING EXPECTATIONS FOR ARTIFICIAL INTELLIGENCE IN THEM CLASS PRESENTATION

Your presentation will be assessed using the following criteria:

1. **Creativity:** Overall creativity and innovation of the proposed solution.
2. **Content:** Quality and depth of understanding of AI and Data Science applications in THEM context. Clear, concise, and well-structured discussion of proposed solution in terms of experiences supported, expected outcomes, and larger implications of technologies in human environment.
3. **Overall Impression:** Quality of presentation in terms of appearance, pace of delivery, visual appeal, and time management.

GENERAL CLASS RULES

- Students should be prepared for each day's class period. You should read the material to be covered each day before you come to class and be ready to answer and ask questions pertaining to the material.
- You will be always asked to support and defend the statements and answers you offer in class and in your report. “Sweeping Generalizations” are never accepted in this course.
- If you miss a class, it is your responsibility to obtain information from other students. Do not expect the instructor to be at your disposal and provide you with the missed information.
- Stay in the same seats through the semester. This will assist us in getting to know you faster.
- If you are marked absent more than three times you will suffer the loss of one full letter grade, which means that if your final grade is B- it will be adjusted to a C-.
- The lectures will complement the text and will not attempt to cover all points raised in the readings.
- Regular and punctual attendance is a necessary but not a sufficient criterion for class participation credit.
- The Instructor reserves the right to make changes in the class schedule to meet the learning needs of the class. These will be communicated in a timely manner in announcements posted

on Canvas as well as orally in class. Please read all announcements and pay attention to any changes.

CLASSROOM BEHAVIOR

- This course requires professional and respectful classroom behavior. Please refrain from engaging in the following activities (including but not limited to): cell phone usage, reading non-class materials such as newspapers, chatting and sleeping. Serious violators will be dismissed from that class meeting.
- If you are late to class or need to leave early please provide an explanation to the instructor.
- Mobile phones must be off during the entire duration of each class meeting.
- No food is allowed in class.
- Please include a greeting and sign all emails when you are contacting your instructor.

WEEKLY COURSE SCHEDULE:

Week	Class Activities	Readings and Cases
1	**Introduction to the class and the syllabus.** General discussion on career Opportunities in Artificial Intelligence (AI) and Data Science in general and in tourism, hospitality & event industries	• Assigned Journal Articles • Book Chapters 1-2 • Cases: The History of AI
2	What is AI revolution? Reviews of history and historical cases and examples across cultures and populations Understanding Travel Behavior through AI ***Essay 1 (due within a week)***	• Assigned Journal Articles • Book Chapters 3-6 • Cases: AI vs. Customer & Visitor Experiences
3	AI in Tourism, Hospitality, and Event Research Introduction: Types of AI, Machine Learning, and Data Sciences	• Assigned Journal Articles • Book Chapters 6-11 • Cases: The First Robots in Lodging
4	More about types of AI, Machine Learning, and Data Sciences. AI in Customer/Visitor Services, businesses, and governments	• Assigned Journal Articles • Book Chapters 12-15 • Cases: Machine Learning in Lodging and Restaurant Sectors
5	World/National Organizations and Corporations that focus on AI Applications ***Essay 2 (due within a week)*** ***Research Project Proposal (draft) Due***	• Assigned Journal Articles • Book Chapters 16-18 • Cases: Machine Learning & Big Data in Global Cases
6	Regional/City Organizations and corporations that focus on AI Applications	• Assigned Journal Articles • Book Chapters 19-22

		• Cases: Companies, cities, and event avenues that Adopt AI and Implement Big Data for Customers
7	AI/Data Science in Film Tourism AI/Data Science in Festival/Event Tourism AI/Data Science in Medical Tourism AI/Data Science in Game Tourism AI/Data Science in Space Tourism and the future	• Assigned Journal Articles • Book Chapters 23-24 • Cases: Travel and Tourism Systems that utilize AI and Implement Big Data for locals and visitors
8	AI in International Tourism ***Essay 3 (due within a week)*** ***Mid-term exam*** ***Research Project Proposal (final version) Due***	• Assigned Journal Articles • Book Chapter 25-26 • Cases: Smart Airports and Transportation Systems in the world
9	Impacts of AI Through the Lenses of Components Supply and Demand	• Assigned Journal Articles • Cases: Germany vs. Japan
10	AI's Economic Impacts Artificial Intelligence vs. Environment and Societies	• Assigned Journal Articles • Cases: Impact Assessments and beyond
11	**Group Project preparation/introduction**	
12	***Group Project Proposal Due***	
13	Tourism Planning Through Artificial Intelligence Tourism Marketing Through Artificial Intelligence ***Research Paper (draft) Due***	Cases: Smart Communities and Quality of Life Assessment
14	Using AI to Promote Destinations	Cases: Public Sectors that adopted/will adopt more AI
15	Concurrent Tourism Cases The Future Shape	What's Next? What's New? So What?
16	**Presentations** ***Group Project Paper Due*** ***Research Paper (final version) Due***	
17	**Final Exam**	

SUCCESS AND STUDY TIPS:

Read all assigned materials before the class. Reach out to the instructor for further advice whenever you feel that you need help. Challenge yourself by advancing your critical thinking, re-searching more concurrent news, and being aware of the trends/needs/wants of the industries, communities, and destinations.