Graduate Curriculum Committee

Agenda

December 1, 2025
Meeting Materials

Voting Conducted
via Zoom

I. Presentation and review of the Minutes from the November Meeting of the Graduate Curriculum Committee (GCC).

II. Update(s) to the Committee: The following was reviewed by the Graduate Curriculum Committee (GCC) previously. The GCC felt further follow-up and/or clarifications were necessary before the proposals could move forward to the University Curriculum Committee (UCC). Suggestions and/or follow-up required are noted below the proposals.

There are no updates to present at this time.

III. Course Change Proposal(s): The following proposals are newly requested revisions to existing courses already within the current course catalog in the curriculum inventory. The changes requested are listed below each of the proposals.

There are no modifications to present at this time.

IV. New Course Proposal(s) (with attached syllabi): The following are newly requested course proposals. Proposed course titles and descriptions are listed below. Syllabi have been included with these new course requests, at the request of GCC Members.

CALS – Agricultural Education and Communication

1. AEC 6XXX *Communicating about Agricultural and Natural Resources Research*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21935

   The proposal has been approved by the GCC with a note to ensure the syllabus provided to students follows the updated guidelines.

PHHP – Health Science

2. CLP 6XXX *Behavioral Foundations: Developmental & Social Influences*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22176

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

3. CLP 6XXX *Clinical Master's Practicum*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22177

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

4. CLP 6XXX *Research in Perioperative Cognitive Medicine Seminar*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22168

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

COE – School of Human Development and Organizational Studies in Education

5. EDA 7XXX *Fieldwork in Educational Leadership and Policy*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21890

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

6. EDA7XXX *Advanced Scholarly Writing in Educational Leadership and Policy*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21889

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

7. EDF 7XXX *Computational Psychometrics*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21983

   The proposal has been approved by the GCC with a note to ensure the syllabus provided to students follows the updated guidelines.

ENG – Electrical and Computer Engineering

8. EEL 6XXX *Safe Autonomous Systems*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22004

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

CALS – Entomology and Nematology

9. ENY 6XXX *Arthropod Vector Identification for Public Health*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21850

   The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

CALS – Natural Resources and Environment

10. EVR 69XX *Supervised Teaching in Ecology and Environment*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22038

    The proposal has been approved by the GCC with a note to ensure the syllabus provided to students follows the updated guidelines.

VM – Small Animal Clinical Sciences

11. VME 6XXX *Caring for Nontraditional Species in Animal Shelters*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/20136

    The proposal has been conditionally approved. Once revised, the proposal can be administratively approved without further review by the GCC.

v. Information Items:

1. MCB 5256 - Change Prerequisites – 21805 – Change prerequisites
2. MCB 5945L - Title and prerequisite change – 22050 – Change to course title and prerequisites
3. PHC 6931 - Change course title, variable credits, and max repeat credit – 22215 – Change to course title, variable credits, and maximum repeatable credit

Graduate Curriculum Committee

Agenda

January 8, 2026
Meeting Materials

Voting Conducted
via Zoom

I. Presentation and review of the Minutes from the December Meeting of the Graduate Curriculum Committee (GCC).

II. Update(s) to the Committee: The following was reviewed by the Graduate Curriculum Committee (GCC) previously. The GCC felt further follow-up and/or clarifications were necessary before the proposals could move forward to the University Curriculum Committee (UCC). Suggestions and/or follow-up required are noted below the proposals.

CLAS – Latin American Studies

1. LAS 6XXX *Latin American Thought*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21939

   GCC requested revisions to the joint listing, course description, readings, assignments, and grading. The Committee requested that this proposal be re-reviewed once it was revised. The unit has since revised the attached submission materials, which are attached here.

III. Course Change Proposal(s): The following proposals are newly requested revisions to existing courses already within the current course catalog in the curriculum inventory. The changes requested are listed below each of the proposals.

MED – General Medicine

1. CAI 5724 *AI in Health Design Studio I*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22277

   This is a request to change the credit hours from 1 to 3.

2. CAI 5731 *Biostatistics for AI*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22259

   This is a request to change the credit hours from 2 to 3.

IV. New Course Proposal(s) (with attached syllabi): The following are newly requested course proposals. Proposed course titles and descriptions are listed below. Syllabi have been included with these new course requests, at the request of GCC Members.

HHP – Tourism, Hospitality, & Event Management

1. HMG 6XXX *AI and Blockchain for Secure Hospitality Transactions*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22084

   Explore the convergence of AI and blockchain in securing hospitality systems and transactions. Students design smart contracts, decentralized payment networks, and predictive AI safeguards to enhance transparency, trust, and personalization. Emphasis is placed on compliance, cybersecurity, and strategic innovation for building resilient, next-generation hospitality enterprises.

2. HMG 6XXX *AI Applications in Healthcare Hospitality and Service Innovation*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22086

   Equip healthcare leaders and graduate professionals with strategic frameworks to integrate hospitality, AI, robotics, and service innovation across clinical and wellness environments. Emphasis is placed on personalized experience design, ethical AI governance, operational transformation, and sustainable growth through preparing managers and CEOs to lead the future of compassionate, tech-enabled care delivery.

3. HMG 6XXX *AI-Driven Revenue Optimization in Hospitality*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22070

   Examine how artificial intelligence transforms hospitality revenue management. Students design AI-powered forecasting, pricing, and personalization models that optimize profit across channels. Through case studies and real-world applications, learners integrate data, ethics, and strategy to build sustainable, future-ready frameworks for AI adoption in revenue, marketing, and distribution decisions.

4. HMG 6XXX *Automation and Robotics in Hospitality Operations*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22078

   Examine how automation, robotics, and AI are transforming hospitality operations and design. Students analyze ROI, sustainability, and workforce impacts while developing data-driven strategies, digital dashboards, and IoT-enabled systems. Emphasis is placed on innovation, safety, and efficiency through preparing leaders to build resilient, technology-integrated, and future-ready hospitality enterprises.

5. HMG 6XXX *Crisis and Risk Communication in Hospitality*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22073

   Explore AI's transformative role in hospitality crisis and risk communication. Students design AI-enabled warning, messaging, and decision-support systems while analyzing realworld crises. Emphasis is placed on ethical governance, social listening, and resilience strategies that integrate predictive analytics and generative AI to strengthen organizational preparedness and global reputation management.

6. HMG 6XXX *Customer Experience and Personalization in Hospitality*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22071

   Explore how AI transforms customer experience and personalization across tourism, hospitality, and events. Students design intelligent systems integrating chatbots, recommender engines, NLP, and computer vision. Emphasis is placed on ethics, privacy, and governance while developing data-driven strategies that enhance engagement, loyalty, and ROI through scalable, real-time personalization.

7. HMG 6XXX *Ethics and Governance of AI in Global Hospitality*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22080

   Examine the ethical, legal, and cultural dimensions of AI in global hospitality. Students evaluate privacy, bias, and accountability challenges while designing governance frameworks that ensure fairness and transparency. Emphasis is placed on human-centric service, sustainable innovation, and building responsible AI strategies aligned with global ethical and regulatory standards.

8. HMG 6XXX *Foodservice AI and Kitchen Automation*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22079

   Explore how AI, robotics, and automation are revolutionizing foodservice operations. Students design predictive models, digital twins, and smart kitchen systems to enhance efficiency, sustainability, and guest experience. Emphasis is placed on financial justification, workforce transformation, and ethical governance in developing scalable, future-ready AI strategies for global foodservice enterprises.

9. HMG 6XXX *Hospitality Big Data & Machine Learning*
   Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22069

   Explore the intersection of hospitality, big data, and machine learning. Students learn to analyze diverse data sources, design AI-driven decision systems, and apply predictive analytics for pricing, marketing, and personalization. Emphasis is placed on ethics, robotics, and sustainable innovation to shape the AI-powered hospitality enterprise of the future.

10. HMG 6XXX *Hospitality Franchise Management*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22076

    Explores advanced strategies in hospitality franchising, from market expansion and brand management to financial modeling and global operations. Students design data-driven growth plans, negotiate franchisor–franchisee agreements, and integrate ESG and digital transformation initiatives, developing investor-ready frameworks that enhance profitability, brand equity, and sustainable global franchise success.

11. HMG 6XXX *Innovations in Restaurant Tech & Design*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22083

    Explore how AI, automation, and design innovation are reshaping modern restaurants. Students integrate data from POS, IoT, and CRM systems to engineer smart kitchens, immersive dining environments, and sustainable operations. Emphasis is placed on ROI modeling, workforce technology, and future-ready design strategies for intelligent, profitable restaurant ecosystems.

12. HMG 6XXX *Market & Consumer Research Practices in Hospitality*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22075

    Explore Generative AI's role in transforming hospitality market research. Students design LLM-based sentiment, persona, and forecasting models to unify B2C and B2B insights. Emphasis is placed on automation, ethical governance, and ROI-driven strategies that integrate NLP, recommendation systems, and competitive intelligence into adaptive, data-informed decision frameworks.

13. HMG 6XXX *Menu Engineering & Data Analytics*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22081

    Explore AI-driven menu engineering as a strategic and analytical discipline. Students design data ecosystems, predictive models, and visualization dashboards to optimize pricing, demand forecasting, and sustainability. Emphasis is placed on personalization, nutrition, and profitability through equipping future leaders to craft intelligent, globally competitive, and ethically informed menu strategies.

14. HMG 6XXX *Negotiation and Conflict Resolution in Hospitality*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22072

    Examine negotiation and conflict resolution through the lens of AI innovation in hospitality. Students explore NLP, computer vision, and predictive analytics to design intelligent mediation and dispute-resolution systems. Emphasis is placed on ethics, cross-cultural dynamics, and AI–human collaboration to build emotionally intelligent, future-ready hospitality businesses.

15. HMG 6XXX *Professional Paper: Strategic Marketing & Brand Positioning*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22085

    Evaluate how artificial intelligence transforms marketing and brand strategy in global hospitality. Students design predictive, data-driven campaigns, dynamic pricing models, and AI-powered CRM systems. Emphasis is placed on ethical AI use, ROI measurement, and future-forward strategies that elevate brand positioning, personalization, and competitiveness in evolving markets.

16. HMG 6XXX *Simulation and Digital Twins in Hospitality Design and Operations*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22074

    Explore simulation and digital twin technologies as strategic tools for optimizing hospitality operations. Students design dynamic models integrating IoT and enterprise data to enhance efficiency, safety, and guest experience. Emphasis is placed on predictive maintenance, ESG optimization, workforce planning, and developing scalable, evidence-based roadmaps for digital transformation.

17. HMG 6XXX *Smart Culinary Lab*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22082

    Immerse students in the Smart Culinary Lab, where technology, design, and strategy converge. Learners develop AI-assisted menus, smart-kitchen architectures, and data-driven business models. Emphasis is placed on sustainability, financial modeling, and pilot execution, culminating in a board-ready venture pitch that showcases innovation, operational feasibility, and measurable ROI.

18. HMG 6XXX *Talent Management and Workforce Analytics in Hospitality*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22077

    Explore AI's transformative role in hospitality workforce management. Students design predictive and NLP-driven talent analytics, optimize scheduling and training, and build ethical, data-informed HR systems. Emphasis is placed on fairness, engagement, and ROI, preparing leaders to deploy scalable AI strategies that enhance productivity, retention, and employee experience.

DCP – Interior Design

19. IND 5XXX *Inclusive Design in the Built Environment*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/22235

    Explores how human abilities and disabilities intersect with the built environment, emphasizing inclusive and human-centered design. Covers lived experiences of diverse user groups, environmental barriers and supports, and research methods that inform evidence-based strategies to enhance accessibility, autonomy, and quality of life.

VM – Infectious Diseases and Pathology

20. VME 6XXX *Grantsmanship Course*
    Link to proposal: https://secure.aa.ufl.edu/Approval/reports/21675

This is an intensive grants writing course (4 credits) designed to produce at the end of the Summer C Session,80% of the components for a complete F31/32 grant (PA-2372/) application for submission during the NIHNRSA December cycle. Students must participate in the discussion in a meaningful way in every class. The course includes group/class discussions and one-on-one meetings with the instructor to get individualized guidance to complete the grant application sections.

v. Information Items:

1. BCN 5705C – 21546 – Change to course title, description, and prerequisites
2. BCN 5722 – 21547 – Change to course title, description, and prerequisites
3. BCN 6785 – 21544 – Change to course title, description, and prerequisites
4. CLP 7949 – 22318 – Change variable and maximum repeatable credit
5. DCP 7790 – 22126 – Change to course description
6. DCP 7981 – 22129 – Change to course description
7. EEL 5840 – 22042 – Add AI designation to an existing course
8. EEL 6935 – 22044 – Add AI designation to an existing course
9. GMS 6856 – 21934 – Add AI designation to an existing course
10. GMS 7858 – 21937 – Add AI designation to an existing course

LAS 6XXX Latin American Thought (21939)

Please address the following concerns expressed by the Graduate Curriculum Committee after their complete review of this new course request ---once addressed, the GCC requests to review this proposal again.

The GCC recommends the following revisions to the submitted form (and syllabus where appropriate):

1) Described as a 4/6, but that was not selected on the submitted form. There was no undergrad syllabus attached also attached to this proposal. We see that it was submitted as 20409 (that submission should also indicate the joint level in the form)

2) Unable to evaluate if joint 4/6 without the undergrad syllabus and the suggested course differentiation attachment. Currently, the only difference appears to be paper length but not evaluation, objectives, or other aspects.

3) The course description needs minor revisions.

    a) Not sure course description is sufficiently specific to convey the course content to prospective students.

    b) There is no course description on the syllabus. There is a similar paragraph for the objectives, but it does not match the submitted form.

    c) Ensure that the course description on the submitted form and syllabus match.

4) The discussion of the textbook is imprecise. It says there is no textbook, but students should get some unspecified print versions of a set of books listed.

5) Request the inclusion of the reading list in alignment with the schedule on the syllabus. Doesn't necessarily have to be weekly. If all readings are not available, a sample will suffice.

6) Clarify the grading. Difficult adding up the different sections of the rubric to come to 100%. The complexity of the point distributions is confusing.

Course|New for request 21939

Info

Request: LAS 6XXX Latin American Thought
Description of request: Additional request for a new course on Latin American Thought for undergraduate and graduate students from all majors. In August 2024 I first submitted the request of both numbers for this course, undergraduate and graduate, which was approved by the UCC in September 2025 and sent to the Statewide Course Numbering System. Then I received an email stating that I had to submit this separated request for the graduate level.
Submitter: Luis Felipe Gomez Lomeli luisgomezlomeli@ufl.edu
Created: 11/25/2025 1:59:03 PM
Form version: 2

Responses

Recommended Prefix LAS
Course Level 4/6

Course Number XXX
Lab Code None
Course Title Latin American Thought
Transcript Title Latin Am. Thought
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year 2025
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Seminar
Weekly Contact Hours 3
Course Description Latin American Thought offers students from all majors a comprehensive overview, as well as an in-depth discussion, of the most influential Latin American thinkers, their works, and their dialogue with other thinkers from around the world.
Prerequisites Sophomore standing or higher.
Co-requisites N/A
Rationale for Placement in the Curriculum The depth and impact of UF connections with Latin America, as well as the widely shared interest of our students in Latin America invites us to offer a new course entirely dedicated to the study and analysis of the most relevant Latin American thinkers and their contributions to Western philosophical thought.
Across campus, there are several courses on Latin American history, politics, cultures, languages, and many others dedicated to analyze—from local, national, and global approaches—a wide range of economic, social, and environmental issues in the region. But there is no course exclusively devoted to offer a comprehensive overview of the foundations underlying Latin American philosophical thought. The course we are proposing here will fulfill that need. Thus, this course will work as the necessary addition to complement the professional training of graduate students of all majors—history, business, Spanish, Portuguese, political science, art, philosophy, journalism, economics, ecology, et cetera—interested in the region and willing to develop a more profound theoretical understanding of their corresponding fields from a Latin American perspective.
Syllabus Content Requirements All Items Included

Latin American Thought (LAS 4xxx/LAS 6xxx)

Spring 2026 | Class No. xxx/xxx | Sec. xxx/xxx

Center for Latin American Studies **University of Florida**

INSTRUCTOR: Dr. Luis Felipe Lomelí

CONTACT INFO: Grinter 319F, 352-273-4714, email: luisgomezlomeli@ufl.edu

CLASS SESSIONS: 3 hour sessions, XXX xxxx,

OFFICE HOURS: M-Th 9:00 – 10:30 am. You can email me to arrange a more convenient time to meet, either via zoom or in person.

COURSE DESCRIPTION: Latin American Thought offers students from all majors a comprehensive overview, as well as an in-depth discussion, of the most influential Latin American thinkers, their works, and their dialogue with other thinkers from around the world.

OBJECTIVES: This course has been designed as a seminar for students from any discipline—humanities, natural sciences, social sciences—and at all stages of their programs to cover the most important proposals of Latin American thinkers and their connections with scholars, philosophers, and movements from other parts of the world. **At the conclusion of this course you will be able to:**

1. Identify some of the most important philosophical Latin American proposals across history.
2. Critically analyze different philosophical currents and texts.
3. Ponder the impact and importance—locally and globally—of different Latin American voices.
4. Establish connections among several currents of thought.
5. Advance in your close-reading analytical skills.
6. Graduate students will be also able to analyze the dialogue between Latin American thinkers and selected thinkers from around the world.

COURSE FORMAT:

This is a discussion-based seminar, not a history of philosophy course. Thus, every week we will read group of philosophers and try to understand the world through their worldview. Then, during class time, we will discuss the consequences and impacts of conceptualizing the world according to the reading. Consequently, it is unpredictable where the whole-class discussion will takes us, but all sessions will have the following elements:

1.Presenting the main reading.

2.Contextualizing the reading (author's biography, socio-historical context, intended original audience, author's influences and author's influence, etc.)

3.Connecting the reading with the other readings.

4.Imagining the world through the main reading.

5.Discussing, dissecting, and criticizing the main reading.

COURSE MATERIALS: There is no textbook, up to this date, that can be used in this course to keep it sufficiently updated and, at the same time, that could offer a comprehensive syllabus on the broad spectrum of Latin American Thought. Although, these titles are recommended to serve as a guide:

-Gracia, Jorge J. E. (Ed.) *Latin American Philosophy in the Twentieth Century: Man, Values, and the Search for Philosophical Identity*. Amherst, Prometheus Books, 1986.

-Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.) *Latin American Philosophy for the 21st Century: The Human Condition, Values, and the Search for Identity*. Lanham, Prometheus Books, 2004.

-Kamugisha Aaron (Ed.) *Caribbean Political Thought: The Colonial State to Caribbean Internationalists*. Kingston, Ian Randle Publishers, 2013.

-Mendieta, Eduardo (Ed.) *Latin American Philosophy: Currents, Issues, Debates*. Bloomington, Indiana University Press, 2003.

It is strongly advised that students, based on their own research interests, will get a print copy of at least some of the books listed in the bibliography. Most readings will be provided either through UF's library access or on Canvas, but students will need to do their own research on the social, historical, and personal contexts of the authors. This course does not require additional fees.

EVALUATION, ASSIGNMENTS, AND GENERAL POLICIES

Participation: 25%
Weekly assignments: 35%
Midterm essay: 10%
Final project: 30%

Evaluation: Final grades will be assigned on the following scale (based on percentage points out of the total): **A:** >93% **A-:** 92-90% **B+:** 89-87% **B:** 86-83% **B-:** 82-80% **C+:** 79-77% **C:** 76-73% **C-:** 72-70% **D+:** 69-67% **D:** 66-63% **D-:** 62-60% **E:** 59% and below.

Participation 25%: This is a discussion-based seminar. Graduate students will have one or two, more specialized readings per week and will be in charge of presenting these to undergraduate students.

RUBRIC FOR PARTICIPATION
The concept of participation includes the punctual attendance to all sessions, showing to have read all the required texts for each and all sessions, and asking and answering meaningful and acute questions regarding each topic during whole-class discussion.
-The student arrived to all sessions before the class began, volunteered at least once to present the main reading and the author's context, showed to have read all the required texts, and actively engaged in asking and answering questions in all sessions…… 25%
-The student arrived to almost all sessions before the class began, volunteered at least once to present the main reading and the author's context, showed to have read almost all texts, and actively engaged in asking and answering questions in almost all sessions… 15-20%
-The student arrived late or did not arrive to more than 2 sessions, volunteered at least once to present the main reading or the author's context, showed to have read around half of the required texts, and sometimes engaged in class discussion…… 10-15%
-The student arrived late or did not arrive to more than 2 sessions, did not volunteered at least once to present the main reading and/or the author's context, showed to have read less than half of the required texts, and sometimes engaged in class discussion…… 5-10%

Weekly assignments 35%: We will have two kinds of weekly assignments: Visual takes and journal.

Visual takes: For each reading, students will need to prepare—and show during class time—their "visual take" of the reading. A visual take is a graphic critical summary of the reading which highlights both the aspect that the student considered to be the most important part of the reading and the student's critical stance to that statement.

Journal: Students need to write a journal of 11 to 12 entries during this semester; or one entry per each time we read and discuss an author, which, roughly, will be once per week. In each of these entries, and from a personal point of view, students will need to address our reading/discussion of the week. Each entry can be a reflection on how it made the student to rethink a particular life experience, it can be an explanation or an interpretation of anything that happened on their daily life through the lenses of that particular author or theory, it can also be a discussion of how that philosophical stance could help to understand a particular social issue. Or it can be a rant too, a poem, a cynical and satirical short essay.

Both the Visual takes and the Journal entries will be graded on a submitted/no-submitted basis.

Midterm essay 10% (written paper 8%, in-class presentation 2%): Present a comprehensive, critical review of the authors covered in class so far.

Undergraduate students expected essays' length: 1,500 – 2,000 words. Graduate students expected essays' length: 5,000 – 6000 words.

Both graduate and undergraduate students will also need to do a 15-minute presentation of their essays on the assigned date.

Final project 30% (written paper 20%, in-class presentation 10%): The topic of the final essays should be discussed with and approved by the instructor (it can be, for example, a critical comparison of another Latin American or Western thinker, not seen in class, with the authors covered in the seminar; the proposal of a new philosophical system nurtured by the authors seen in class; a detailed critical dissection of a Latin American author's work, et cetera).

Undergraduate students expected essays' length: 4,000 – 5,000 words. Graduate students expected essays' length: 9,000 – 11,000 words.

Both graduate and undergraduate students will also need to do a 15-minute presentation of their essays on the assigned date.

Attendance and Make-Up Work: Because this is a discussion-based seminar, students' attendance and active participation is required for the course's functioning and the mutual enrichment of all its participants. Requirements for class attendance and coursework are consistent with university policies found at: https://gradcatalog.ufl.edu/graduate/regulations/#text. Once a deadline has passed, an assignment will not receive full credit. If you are experiencing issues, please consult the instructor to talk about other arrangements BEFORE the assignment is due. Communication with the instructor is key!

Students are responsible for monitoring their grades and missing assignments on Canvas. The instructor is not responsible for informing students about missing work. Check the Canvas site and email regularly for updates. This is the main form of communication for the course.

UF ACADEMIC POLICIES & SUPPORT SERVICES

Please visit: https://go.ufl.edu/syllabuspolicies

WEEKLY TOPICS AND READING ASSIGNMENTS
Subject to change according to the group's interests

Week 1: Presentation and general introduction.

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Week 2: Can or should there be a Latin American philosophy?: Augusto Salazar Bondy and Leopoldo Zea.

Main readings: 1. Augusto Salazar Bondy: *The Meaning and Problem of Philosophy in Latin America.*

2. Leopoldo Zea: *The Actual Function of Philosophy in Latin America*.

Both readings in Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.)

Graduate students extra reading: Aaron Kamugisha: *The Responsibility of Caribbean Intelectuals.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 3: Pre-Independence Thinkers: Bartolomé de las Casas and Sor Juana Inés de la Cruz.

Main readings: 1. Bartolomé de las Casas: *In Defense of the Indians* (excerpts).

2. Sor Juana Inés de la Cruz: *Response to Sister Filotea* (excerpts) and Poem 92.

Both readings in Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.)

Graduate students extra reading: Sylvia Wynter: *New Seville and the Conversion Experience of Bartolomé de las Casas* (excerpts). In Kamushinga, A. (Ed.)

Other assignments: 1. Visual take.

2. Journal entry.

Week 4: Independence Thinkers: José Martí and Simón Bolívar.

Main readings: 1. José Martí: *Our America*.

2. Simón Bolívar: *Jamaica Letter* and *Address Delivered at the Inauguration of the Second National Congress.*

Both readings in Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.)

Graduate students extra readings: 1. The Haitian Constitution of 1805.

2. Jean Jacques Dessalines, *Liberty Proclamation.*

Both readings in Kamushinga, A. (Ed.)

Other assignments: 1. Visual take.

2. Journal entry.

Week 5: Latin American Conservative Thinkers: Antonio Caso, José Vasconcelos, and Samuel Ramos.

Main readings: 1. Antonio Caso: *The Human Person and the State* and *Existence as Economy, Disinterest, and Charity*.

2. José Vasconcelos: *Todología* (excerpts).

3. Samuel Ramos: *Towards a New Humanism* (excerpts).

All readings in Gracia, Jorge J. E. (Ed.)

Graduate students extra reading: Octavio Paz: *Labyrinth of Solitude.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 6: Latin American Philosophical Anthropology: Carlos Astrada and Francisco Miró Quezada.

Main readings: 1. Carlos Astrada: *Existencialism and the Crisis of Philosophy* (excerpts).

2. Francisco Miró Quezada: *Man without Theory* (excerpts).

Both readings in Gracia, Jorge J. E. (Ed.)

Graduate students extra reading: Paul K. Feyerabend: *Against Method*.

Other assignments: 1. Visual take.

2. Journal entry.

Week 7: The Nation and the People I: Domingo Faustino Sarmiento and Suzanne Césaire.

Main readings: 1. Domingo Faustino Sarmiento: *Civilization and Barbarism* (excerpts). In Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.)

2. Suzanne Césaire: *The Malaise of a Civilization*. In Kamushinga, A. (Ed.)

Graduate students extra reading: Emanuele Coccia: *The Life of Plants*.

Other assignments: 1. Visual take.

2. Journal entry.

Week 8: Midterm Presentations and Midterm Essay Submission.

Week 9: The Nation and the People II: José Carlos Mariátegui and Walter Rodney.

Main readings: 1. José Carlos Mariátegui: *Seven Interpretative Essays on Peruvian Reality* (excerpts). In Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.)

2. Walter Rodney: *Statement of the Jamaican Situation.* In Kamushinga, A. (Ed.)

Graduate students extra reading: Elizabeth Burgos: *I, Rigoberta Menchú*.

Other assignments: 1. Visual take.

2. Journal entry.

Week 10: Philosophy of Liberation: Hélder Câmara.

Main readings: Hélder Câmara: *The Spiral of Violence*.

Graduate students extra reading: Hannah Arendt: *On Violence.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 11: Latin American Epistemology and Philosophy of Science: Silvio Funtowicz and Jerome Ravetz.

Main reading: Silvio Funtowicz and Jerome Ravetz: *Science for the Post-Normal Age*.

Graduate students extra reading: Thomas S. Khun: *The Structure of Scientific Revolutions* (first 3 chapters).

Other assignments: 1. Visual take.

2. Journal entry.

Week 12: Latin American Nature Thought: Leonardo Boff and Marta Lanza.

Main readings: 1. Leonardo Boff: *Respect and Care for the Community of Life with Understanding, Compassion, and Love.*

2. Marta Lanza: *Buen Vivir: An introduction from women's rights perspective in Bolivia.*

Graduate students extra readings: 1. Enrique Leff: *Latin American Environmental Thought: A Heritage of Knowledge for Sustainability.*

2. Dipesh Chakrabarty: *The Climate of History, Four Theses.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 13: Latin American Cultura Studies: Carlos Monsiváis and Edwige Danticat.

Main readings: 1. Carlos Monsiváis: *Mexican Postcards* (excerpts).

2. Edwige Danticat: *We are ugly, but we are here.*

Graduate students extra reading: Roberto Fernández Retamar: *Caliban: Notes Toward a Discussion of Culture in Our America.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 14: Globalization Era Thinkers: Beatriz González Stephan and Néstor García Canclini.

Main readings: 1. Beatriz González Stephan: *On Citizenship: The Grammatology of the Body-Politic.* In Mendieta, E. (Ed.)

2. Néstor García Canclini: *Hybrid cultures* (excerpts).

Graduate students extra reading: Rita Segato: *A Manifesto in Four Themes.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 15: Final Projects Presentations.

COMPLETE BIBLIOGRAPHY

Arendt, Hannah. *On Violence*. San Diego, Harvest/HBJ, 1970.

Boff, Leonardo. "Respect and Care for the Community of Life with Understanding, Compassion, and Love." *The Earth Charter in Action*, 2015, pp. 43-46.

Burgos, Elizabeth. *I, Rigoberta Menchú*. London, Verso, 1983.

Câmara, Hélder. *Spiral of Violence*. London, Sheed and Ward Stagbooks, 1971.

Chakrabarty, Dipesh. "The climate of history: Four theses." *Critical inquiry*, vol. 35, no. 2, 2009, pp. 197-222.

Coccia, Emanuele. *The Life of Plants:A Metaphysics of Mixture*. Cambridge, Polity, 2019.

Danticat, Edwidge. "We are ugly, but we are here." *The Caribbean Writer*, Vol. 10, 1996.

Fernández Retamar, Roberto. “Caliban: Notes Toward a Discussion of Culture in Our America.” *Caliban and Other Essays*, Minneapolis, University of Minnesota Press, 1989, pp. 3-45.

Feyerabend, Paul K. *Against Method.* London, Verso, 1993.

Funtowicz, Silvio O. and Jerome R. Ravetz. “Science for the Post-Normal Age.” *Futures*, Sept. 1993, pp. 739-755.

García Canclini, Néstor. *Hybrid Cultures*. Minneapolis, U Minnesota Press, 1995.

Gracia, Jorge J.E. *Latin American Philosophy in the Twentieth Century: Man, Values, and the Search for Philosophical Identity*. Amherst, Prometheus Books, 1986.

Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds). *Latin American Philosophy for the 21st Century: The Human Condition, Values, and the Search for Identity*. Lanham, Prometheus Books, 2004.

Kamugisha Aaron (Ed.) *Caribbean Political Thought: The Colonial State to Caribbean Internationalists*. Kingston, Ian Randle Publishers, 2013.

Lanza, Martha. “Buen Vivir: An introduction from women’s rights perspective in Bolivia.” *Feminist Perspectives towards Transforming Economic Power*, AWID, 2012.

Leff, Enrique. “Latin American Environmental Thought: A Heritage of Knowledge for Sustainability.” *ISEE Publicación Ocasional*, No. 9, 2010, pp. 1-16.

Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Chicago, University of Chicago Press, 1996.

Mendieta, Eduardo (Ed.) *Latin American Philosophy: Currents, Issues, Debates*. Bloomington, Indiana University Press, 2003.

Monsiváis, Carlos. *Mexican Postcards.* London, Verso, 1997.

Paz, Octavio. *The Labyrinth of Solitude*. New York, Grove Press, 1961.

Segato, Rita. “A Manifesto in Four Themes.” *Critical Times*, Vol. 1, Iss. 1, pp. 198-211.

Latin American Thought (LAS 4xxx/LAS 6xxx)

Spring 2025 | Class No. xxx/xxx | Sec. xxx/xxx

Center for Latin American Studies **University of Florida**

INSTRUCTOR: Dr. Luis Felipe Lomelí

CONTACT INFO: Grinter 319F, 352-273-4714, email: luisgomezlomeli@ufl.edu

CLASS SESSIONS: 3 hour sessions, XXX xxxx,

OFFICE HOURS: M-Th 9:00 – 10:30 am. You can email me to arrange a more convenient time to meet, either via zoom or in person.

OBJECTIVES: This course has been designed as a seminar for students from any discipline—humanities, natural sciences, social sciences—and at all stages of their programs to cover the most important proposals of Latin American thinkers and their connections with scholars, philosophers, and movements from other parts of the world. **At the conclusion of this course you will be able to:**

1. Identify some of the most important philosophical Latin American proposals across history.
2. Critically analyze different philosophical currents and texts.
3. Ponder the impact and importance—locally and globally—of different Latin American voices.
4. Establish connections among several currents of thought.
5. Advance in your close-reading analytical skills.

COURSE FORMAT:

This is a discussion-based seminar, not a history of philosophy course. Thus, every week we will read group of philosophers and try to understand the world through their worldview. Then, during class time, we will discuss the consequences and impacts of conceptualizing the world according to the reading. Consequently, it is unpredictable where the whole-class discussion will takes us, but all sessions will have the following elements:

1.Presenting the main reading.

2.Contextualizing the reading (author's biography, socio-historical context, intended original audience, author's influences and author's influence, etc.)

3.Connecting the reading with the other readings.

4.Imagining the world through the main reading.

5.Discussing, dissecting, and criticizing the main reading.

COURSE MATERIALS: There is no textbook, up to this date, that can be used in this course to keep it sufficiently updated and, at the same time, that could offer a comprehensive syllabus on the broad spectrum of Latin American Thought. Although, these titles are recommended to serve as a guide:

-Gracia, Jorge J. E. (Ed.) *Latin American Philosophy in the Twentieth Century: Man, Values, and the Search for Philosophical Identity*. Amherst, Prometheus Books, 1986.

-Gracia, Jorge J. E. and Elizabeth Millán-Zaibert (Eds.) *Latin American Philosophy for the 21st Century: The Human Condition, Values, and the Search for Identity*. Lanham, Prometheus Books, 2004.

-Kamugisha Aaron (Ed.) *Caribbean Political Thought: The Colonial State to Caribbean Internationalists*. Kingston, Ian Randle Publishers, 2013.

-Mendieta, Eduardo (Ed.) *Latin American Philosophy: Currents, Issues, Debates*. Bloomington, Indiana University Press, 2003.

It is strongly advised that students, based on their own research interests, will get a print copy of at least some of the books listed in the bibliography. Most readings will be provided either through UF's library access or on Canvas,

but students will need to do their own research on the social, historical, and personal contexts of the authors. This course does not require additional fees.

EVALUATION, ASSIGNMENTS, AND GENERAL POLICIES

Participation: 25%
Weekly assignments: 35%
Midterm essay: 10%
Final project: 30%

Evaluation: Final grades will be assigned on the following scale (based on percentage points out of the total): **A:** >93% **A-:** 92-90% **B+:** 89-87% **B:** 86-83% **B-:** 82-80% **C+:** 79-77% **C:** 76-73% **C-:** 72-70% **D+:** 69-67% **D:** 66-63% **D-:** 62-60% **E:** 59% and below.

Participation 25%: This is a discussion-based seminar. Graduate students will have one or two, more specialized readings per week and will be in charge of presenting these to undergraduate students.

RUBRIC FOR PARTICIPATION
The concept of participation includes the punctual attendance to all sessions, showing to have read all the required texts for each and all sessions, and asking and answering meaningful and acute questions regarding each topic during whole-class discussion.
-The student arrived to all sessions before the class began, volunteered at least once to present the main reading and the author's context, showed to have read all the required texts, and actively engaged in asking and answering questions in all sessions…… 25%
-The student arrived to almost all sessions before the class began, volunteered at least once to present the main reading and the author's context, showed to have read almost all texts, and actively engaged in asking and answering questions in almost all sessions… 15-20%
-The student arrived late or did not arrive to more than 2 sessions, volunteered at least once to present the main reading or the author's context, showed to have read around half of the required texts, and sometimes engaged in class discussion…… 10-15%
-The student arrived late or did not arrive to more than 2 sessions, did not volunteered at least once to present the main reading and/or the author's context, showed to have read less than half of the required texts, and sometimes engaged in class discussion…… 5-10%

Weekly assignments 35%: We will have two kinds of weekly assignments: Visual takes and journal.

Visual takes: For each reading, students will need to prepare—and show during class time—their "visual take" of the reading. A visual take is a graphic critical summary of the reading which highlights both the aspect that the student considered to be the most important part of the reading and the student's critical stance to that statement.

Journal: Students need to write a journal of 11 to 12 entries during this semester; or one entry per each time we read and discuss an author, which, roughly, will be once per week. In each of these entries, and from a personal point of view, students will need to address our reading/discussion of the week. Each entry can be a reflection on how it made the student to rethink a particular life experience, it can be an explanation or an interpretation of anything that happened on their daily life through the lenses of that particular author or theory, it can also be a discussion of how that philosophical stance could help to understand a particular social issue. Or it can be a rant too, a poem, a cynical and satirical short essay.

Both the Visual takes and the Journal entries will be graded on a submitted/no-submitted basis.

Midterm essay 10% (written paper 8%, in-class presentation 2%): Present a comprehensive, critical review of the authors covered in class so far.

Undergraduate students expected essays' length: 1,500 – 2,000 words. Graduate students expected essays' length: 5,000 – 6000 words.

Both graduate and undergraduate students will also need to do a 15-minute presentation of their essays on the assigned date.

Final project 30% (written paper 20%, in-class presentation 10%): The topic of the final essays should be discussed with and approved by the instructor (it can be, for example, a critical comparison of another Latin American or Western thinker, not seen in class, with the authors covered in the seminar; the proposal of a new philosophical system nurtured by the authors seen in class; a detailed critical dissection of a Latin American author's work, et cetera).

Undergraduate students expected essays' length: 4,000 – 5,000 words. Graduate students expected essays' length: 9,000 – 11,000 words.

Both graduate and undergraduate students will also need to do a 15-minute presentation of their essays on the assigned date.

Attendance and Make-Up Work: Because this is a discussion-based seminar, students' attendance and active participation is required for the course's functioning and the mutual enrichment of all its participants. Requirements for class attendance and coursework are consistent with university policies found at: https://gradcatalog.ufl.edu/graduate/regulations/#text. Once a deadline has passed, an assignment will not receive full credit. If you are experiencing issues, please consult the instructor to talk about other arrangements BEFORE the assignment is due. Communication with the instructor is key!

Students are responsible for monitoring their grades and missing assignments on Canvas. The instructor is not responsible for informing students about missing work. Check the Canvas site and email regularly for updates. This is the main form of communication for the course.

UF ACADEMIC POLICIES & SUPPORT SERVICES

Please visit: https://go.ufl.edu/syllabuspolicies

WEEKLY TOPICS AND READING ASSIGNMENTS
Subject to change according to the group's interests

Week 1: Presentation and general introduction.

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Week 2: Can or should there be a Latin American philosophy?: Augusto Salazar Bondy and Leopoldo Zea.

Main readings: 1. Augusto Salazar Bondy: *The Meaning and Problem of Philosophy in Latin America.*

2. Leopoldo Zea: *The Actual Function of Philosophy in Latin America*.

Graduate students extra reading: Aaron Kamugisha: *The Responsibility of Caribbean Intelectuals.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 3: Pre-Independence Thinkers: Bartolomé de las Casas and Sor Juana Inés de la Cruz.

Main readings: 1. Bartolomé de las Casas: *In Defense of the Indians* (excerpts).

2. Sor Juana Inés de la Cruz: *Response to Sister Filotea* (excerpts) and Poem 92.

Graduate students extra reading: Sylvia Wynter: *New Seville and the Conversion Experience of Bartolomé de las Casas* (excerpts).

Other assignments: 1. Visual take.

2. Journal entry.

Week 4: Independence Thinkers: José Martí and Simón Bolívar.

Main readings: 1. José Martí: *Our America*.

2. Simón Bolívar: *Jamaica Letter* and *Address Delivered at the Inauguration of the Second National Congress.*

Graduate students extra readings: 1. The Haitian Constitution of 1805.

2. Jean Jacques Dessalines, *Liberty Proclamation.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 5: Latin American Conservative Thinkers: Antonio Caso, José Vasconcelos, and Samuel Ramos.

Main readings: 1. Antonio Caso: *The Human Person and the State* and *Existence as Economy, Disinterest, and Charity.*

2. José Vasconcelos: *Todología* (excerpts).

3. Samuel Ramos: *Towards a New Humanism* (excerpts).

Graduate students extra reading: Octavio Paz: *Labyrinth of Solitude.*

Other assignments: 1. Visual take.

2. Journal entry.

Week 6: Latin American Philosophical Anthropology: Carlos Astrada and Francisco Miró Quezada.

Main readings: 1. Carlos Astrada: *Existencialism and the Crisis of Philosophy* (excerpts).

2. Francisco Miró Quezada: *Man without Theory* (excerpts).

Graduate students extra reading: Paul K. Feyerabend: *Against Method*.

Other assignments: 1. Visual take.

2. Journal entry.

Week 7: The Nation and the People I: Domingo Faustino Sarmiento and Suzanne Césaire.

Main readings: 1. Domingo Faustino Sarmiento: *Civilization and Barbarism* (excerpts).

2. Suzanne Césaire: *The Malaise of a Civilization*.

Graduate students extra reading: Emanuele Coccia: *The Life of Plants*.

Other assignments: 1. Visual take.

2. Journal entry.

Week 8: Midterm Presentations and Midterm Essay Submission.

Week 9: The Nation and the People II: José Carlos Mariátegui and Walter Rodney.

Main readings: 1. José Carlos Mariátegui: *Seven Interpretative Essays on Peruvian Reality* (excerpts).

2. Walter Rodney: *Statement of the Jamaican Situation.*

Graduate students extra reading: Elizabeth Burgos: *I, Rigoberta Menchú*.

Other assignments: 1. Visual take.

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Week 10: Philosophy of Liberation: Hélder Câmara.

Main readings: Hélder Câmara: *The Spiral of Violence*.

Graduate students extra reading: Hannah Arendt: *On Violence.*

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Main reading: Silvio Funtowicz and Jerome Ravetz: *Science for the Post-Normal Age*.

Graduate students extra reading: Thomas S. Khun: *The Structure of Scientific Revolutions* (first 3 chapters).

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Main readings: 1. Beatriz González Stephan: *On Citizenship: The Grammatology of the Body-Politic.*

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Graduate students extra reading: Rita Segato: *A Manifesto in Four Themes.*

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Week 15: Final Projects Presentations.

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Segato, Rita. "A Manifesto in Four Themes." *Critical Times*, Vol. 1, Iss. 1, pp. 198-211.

Course|Modify for request 22277

Info

Request: CAI 5724 AI in Health Design Studio I - request to increase course credits
Description of request: We are requesting to increase this course's number of credits from 1 to 3.
Submitter: Elizabeth Palmer eanpalmer@ufl.edu
Created: 12/12/2025 7:44:16 AM
Form version: 1

Responses

Current Prefix CAI
Course Level 5
Number 724
Lab Code None
Course Title AI in Health Design Studio I
Effective Term Earliest Available
Effective Year Earliest Available
Requested Action Other (selecting this option opens additional form fields below)
Change Course Prefix? No

Change Course Level? No

Change Course Number? No

Change Lab Code? No

Change Course Title? No

Change Transcript Title? No

Change Credit Hours? Yes
Current Credit Hours 1
Proposed Credit Hours 3
Change Variable Credit? No

Change S/U Only? No

Change Contact Type? No

Course Type Seminar

Change Rotating Topic Designation? No

Change Repeatable Credit? No

Multiple Offerings in a Single Semester No
Change Course Description? No

Change Course Objectives No

Change Prerequisites? No

Change Co-requisites? No

Rationale We are requesting to increase the number of credit hours to give students more opportunity to work with each other and the instructor on the skills that will be taught. These are quite technical, and added contact time will better allow the students to learn. In addition to increased contact hours, we are increasing the number of hands-on assignments from 13 to 39 and expanding the scope of the final project so that students produce a portfolio of projects, as opposed to one. Students will gain more knowledge and skills, better preparing them for future classes and independent work.

CAI 5724: AI in Health Design Studio I

Semester: Fall 202X
Location: DSIT 2400
Zoom: https://ufl.zoom.us
Class Meetings: Friday 1:55 – 4:55 pm
Credit Hours: 3

Instructor

Benjamin Shickel, PhD
shickelb@ufl.edu
352-273-9958
DSIT 2400

Teaching Assistant

TA Name
taemail@ufl.edu
352-XXX-XXXX
DSIT 2400

Office Hours

- Hybrid office hours will be held every Thursday from 4-5pm over Zoom and in-person at Malachowsky Hall Room 2400 (DSIT 2400).
    - **Office hours Zoom link:** https://ufl.zoom.us
- Students may also reach out by email to schedule individual appointments at any other time.

Course Website

https://elearning.ufl.edu

Course Communications

E-mail is the preferred method of communication.

Required Textbook

None.

Required Computing Resources

- Access to a computer capable of running Python code (specifically, a Jupyter notebook server) is required.
- During class meetings, students may either use their personal laptops or the in-room desktops.
- Outside of class, students who do not have access to a personal laptop or desktop to complete their at-home assignments have multiple options:
    - Complete assignments on HiPerGator using the course's allocated resources (free, requires an internet connection, VPN if off-campus, and an internet browser.)
    - Completing assignments on Google Colab (requires an internet browser and a Google account)
    - Using one of the many shared UF computer labs to either run code locally or connect to one of the aforementioned remote options.

Materials and Supplies Fees

None.

Course Description

This experiential seminar course will feature numerous faculty experts from diverse backgrounds who will guide students through a broad catalog of unique real-world examples of machine learning for healthcare applications. Students will gain valuable experience in designing, developing, and deploying AI systems using contemporary tools, models, and platforms.

Prerequisite Knowledge and Skills

- A working familiarity and at least some hands-on experience with Python is strongly recommended.
- While the curriculum has been designed for early-stage coders, **this course is not intended to teach Python fundamentals** such as basic syntax, terminology, or basic principles of object-oriented programming (instead, this course will focus on specific data science and machine learning libraries that build on top of Python foundations).

All students are expected to understand basic aspects of the following Python topics prior to the first class:

- Writing and executing Python code
- Variables (assignments and basic calculations)
- Data types (integer, float, string)
- Built-in data structures (list, dictionary)
- Functions (arguments, return values, and defining vs. calling them)
- Libraries (modules, import statements, and using imported functions)
- Conditionals (if, else if, else)
- Loops (for, while)

Additional Resources

Students wishing to gain more experience with Python prior to taking this course can take advantage of widely available free online courses, including:

- Live Python/AI bootcamps and other AI for Health training offered throughout the year by the UF College of Medicine and Office of Research.
- Self-paced and/or in-person Python training workshops developed by UF's Practicum AI (e.g., "A Brief Introduction to Python")
- Python for Everybody, a popular and accessible introductory Coursera course series covering fundamental programming and Python topics.

Course Objectives

After completing this course, students will be able to:

- Create, manage, and install custom Python packages inside Anaconda environments.
- Demonstrate the process for requesting and utilizing HiPerGator computing resources using the Open on Demand interface.
- Run Python code in the browser by connecting to a locally hosted Jupyter notebook server, a remote computing cluster (HiPerGator), or cloud platforms (Google Colab).
- Load, analyze, manipulate, visualize, process, and glean insights from biomedical datasets using pandas and NumPy.
- Identify contemporary software tools, libraries, models, platforms, and applications for developing AI models with diverse forms of patient data.
- Develop and evaluate machine learning and deep learning algorithms for augmenting clinical practice using real-world patient data of multiple modalities and temporal resolutions.
- Explain the ethical challenges and implications surrounding AI for health, and leverage fairness libraries to detect and remedy biased models.

- Explain cutting edge AI topics and techniques, and demonstrate in code how they can be applied for healthcare applications.
- Create and share an instructional Jupyter notebook that guides users through an example of AI applied to healthcare data.
- Explain their clinical AI interests and tentative plan for individual research in AI Design Studio II.

Relation to Program Outcomes

- This course is intended to be taken by incoming AIBHS graduate students during their first semester. Any other students must obtain instructor approval before registration.
- The curriculum is designed to provide a broad survey of the multifaceted clinical AI landscape and to equip students with the practical tools and experience necessary to develop their individual and self-directed AI projects in AI Design Studio II.

Instructional Methods

- This course operates as an experiential clinical AI seminar with rotating featured topics.
- Each week, a relevant clinical AI faculty expert will guide students through the completion of three unique Jupyter notebook that uses AI to solve real-world clinical problems that center around a common theme.
- After class, students will have one week to complete an at-home assignment based on the material presented in class by the domain expert.
- Throughout the semester, students will also develop their own portfolio of Jupyter notebooks to demonstrate unique applications of clinical AI centered around a topic, dataset, and computational technique of each student's choosing.
- During the final three weeks of class, each student will guide the rest of the class through their custom set of Jupyter notebooks.

Course Outline

The following is a tentative schedule of course topics:

Week	Topic(s)	Tools, Libraries, and Models
Software, Platforms, and Infrastructure		
1	Python Environments, Jupyter Notebooks, GitHub	Anaconda, Linux command line, git
2	HiPerGator, Google Colab, Remote Servers	HiPerGator + JupyterLab, Google Colab, ssh
Fundamentals of AI for Health with Structured Patient Data		
3	Data Manipulation, Analysis, and Transformation	Pandas, NumPy, Matplotlib, Seaborn
4	Machine Learning for Patient Risk Estimation	Scikit-Learn, Logistic Regression, XGBoost
5	Deep Learning with Clinical Time Series	PyTorch, MLP, RNN
Deep Learning with Unstructured Patient Data		
6	Information Extraction from Clinical Notes	Hugging Face, Transformer
7	Medical Image Analysis	Tensorflow, Keras, 3D Slicer, MONAI, CNN
8	Temporal Models for Physiological Waveforms	WFDB, SciPy, Fourier transform
9	Precision Health and Multiomics	Parabricks, GATK, K-means clustering
10	Digital Pathology and Spatial Transcriptomics	HistomicsTK, HistoCloud, HistoLens
Emerging Topics in AI for Health		
11	Ethical AI	Fairlean, AIF360, SHAP, Captum
12	Causal AI	DoWhy, EconML, Causal-Learn
13	Generative AI	GPT-4, Gemini Pro, LLaMA 3, 3rd party APIs
Student Notebook Portfolios		
14	Portfolio Showcase + Peer Feedback	
15	Portfolio Showcase + Peer Feedback	
16	Portfolio Showcase + Peer Feedback	

GRADING

Final grades will be determined based on the following percentages:

Requirement	Percentage of Final Grade
In-class notebook assignments (39)	25%
At-home coding assignments (13)	25%
Notebook portfolio (see milestones below)	50%

In-Class Notebooks (25%)

- Each week, three guided in-class Jupyter notebooks will be distributed to the in-person attendees at the start of class. Students will be guided through the notebook in real-time by an AI expert.
- In-class notebooks will not be graded for accuracy. Instead, in-class notebooks will serve primarily to evaluate in-class participation.
- Students must submit their in-class notebooks on Canvas before the end of class to receive attendance credit for that week.

At-Home Coding Assignments (25%)

- Following each week's class in a particular clinical AI domain, students will be assigned an additional Jupyter notebook to complete at home.
- At-home notebooks will contain prompts and instructions to develop AI code and will be less guided and more self-paced than in-class tutorials.
- At-home assignments will be due by the start of class the following week (students will have one week to complete each assignment).
- At-home assignments will be evaluated for correctness and appropriateness (for example, code must run without errors).

Notebook Portfolio (50%)

- Throughout the semester, each student will independently develop their own portfolio of Jupyter notebooks that guides their peers through the development and evaluation of a machine learning model to address a particular clinical task using a publicly available dataset of the student's choosing.
- Beginning in Week 8, several brief assignments will ensure that students remain on track to successfully develop their notebook portfolio (see milestones table below.)
- During the final 3 class meetings, each student will guide their peers through their notebooks.

A timeline and description of notebook portfolio milestones is shown below:

Portfolio Milestone	Deadline	% of Portfolio Grade
Selection and characterization of a publicly available biomedical dataset to be used in the notebook portfolio, including: • Name • URL link • Associated reference/publication, if applicable • Description of data elements • Number of patients • Sample size (if different from number of patients) • Any potential challenges or sources of bias	Week 8 (X/X/202X)	10%
Identification and description of:	Week 9	15%

• The clinical prediction target(s), and the extraction process using the given dataset. • The inputs/features used to predict this outcome, and the process for obtaining them from the given dataset. • A list of 4-5 domain and/or technical topics that will be presented in the notebook as instructional material (text)	(X/X/202X)	
Description of model training and testing procedure, including: • Which machine learning model(s) will be trained. • Whether any pretrained models will be fine-tuned. • Evaluation procedure (e.g., fixed train-test split, k-fold cross-validation) • Estimated computational requirements to train and/or evaluate the model. • Which metrics will be used to evaluate the model performance.	Week 10 (X/X/202X)	15%
Preliminary results completing and analyzing the previously outlined task, including: • Each student will perform the task outlined over the previous 3 submissions and report values of the evaluation metrics they have identified. • A 1-paragraph discussion of results, including whether they were expected, what might be changed based on results, and any challenges faced.	Week 12 (X/X/202X)	15%
Written portfolio documentation and summary sheet, including: • Introduction and significance of the clinical problem • How AI can address the problem. • A summary of the evolution of the portfolio, including all submitted information. • Description of all challenges faced and solutions to overcome them. • Reporting of initial pilot results, and a description of any changes made to the original plan (and why).	Week 14 (X/X/202X)	25%
Participation and submission of in-class peer notebooks (Round 1)	Weeks 14-16 (X/X/202X)	20%

COURSE POLICIES

Attendance

- Attendance is required and lectures will not be recorded.
- Requirements for class attendance are consistent with university policies that can be found at https://gradcatalog.ufl.edu/graduate/regulations/.

Quizzes and Exams

- There are no quizzes or exams in this course.

Make-Up Policy

- Course policies for make-up assignments are consistent with university policies that can be found at https://gradcatalog.ufl.edu/graduate/regulations/.

Assignment Policy

- Each week, students will be assigned a self-directed, at-home Jupyter notebook to complete before the start of the next class.

Course Technology

- In-class activities and at-home assignments will be delivered as Jupyter notebooks (Python).
- Students may use their own laptops or desktop lab computers during class.
- After class, students are required to complete Python notebook assignments using their preferred method (e.g., local machine, HiPerGator, Google Colab, etc.) unless otherwise noted.

Course Evaluation

- 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/.

UNIVERSITY POLICIES

University Policy on Accommodating Students with Disabilities

- "Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester."

University Policy on Academic Conduct

- 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 honesty 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 a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Class Demeanor and Etiquette

- All members of the class are expected to follow rules of common courtesy in all email messages, in-person interactions, and online threaded discussions and chats.

CAMPUS RESOURCES

Health and Wellness

- **U Matter, We Care:** If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.

- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need or visit the Student Health Care Center website.
- **University Police Department:** Visit the UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.
- **GatorWell Health Promotion Services:** For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273-4450.

Academic Resources

- **E-learning technical support:** Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- **Career Connections Center:** Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- **Library Support:** Various ways to receive assistance with respect to using the libraries or finding resources.
- **Teaching Center:** Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- **Writing Studio:** 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- **Student Complaints On-Campus:** Visit the Student Honor Code and Student Conduct Code webpage for more information.
- **On-Line Students Complaints:** View the Distance Learning Student Complaint Process

Course|Modify for request 22259

Info

Request: CAI 5731 - increase number of course credits
Description of request: We would like to increase the number of credits for CAI 5731 from 2 to 3.
Submitter: Elizabeth Palmer eanpalmer@ufl.edu
Created: 12/9/2025 8:15:30 AM
Form version: 1

Responses

Current Prefix CAI
Course Level 5
Number 731
Lab Code None
Course Title Biostatistics for AI
Effective Term Fall
Effective Year 2026
Requested Action Other (selecting this option opens additional form fields below)
Change Course Prefix? No

Change Course Level? No

Change Course Number? No

Change Lab Code? No

Change Course Title? No

Change Transcript Title? No

Change Credit Hours? Yes
Current Credit Hours 2
Proposed Credit Hours 3
Change Variable Credit? No

Change S/U Only? No

Change Contact Type? No

Course Type Lecture

Change Rotating Topic Designation? No

Change Repeatable Credit? No

Multiple Offerings in a Single Semester No
Change Course Description? No

Change Course Objectives No

Change Prerequisites? No

Change Co-requisites? No

Rationale Given the broad range of topics covered in this course, additional in-class learning time is necessary for students to fully grasp and apply the material. The course will now include three hours of class per week, up from two. Furthermore, the number of homework assignments has increased from four to five, and the number of quizzes from four to six, providing more opportunities for students to engage with and practice key concepts.

Biostatistics for Artificial Intelligence
CAI 5731 Section ###
Class Periods: ### (3 hours)
Location: ###
Academic Term: Fall 2025

Instructor:
Name: Tezcan Ozrazgat Baslanti, PhD
Email Address: tezcan@ufl.edu
Office Phone Number: (352) 273-6668
Office: Malachowsky Hall Room 6404
Office Hours: W 3-5 by Appointment
TA: TBD

Course Description
Biostatistics for AI highlights the crucial role of biostatistics in AI-driven medical applications. Students will master foundational biostatistical methods, design effective medical experiments, and navigate the intricacies of large biomedical datasets. Emphasizing the union of traditional biostatistics with contemporary AI techniques, the course ensures proficiency in data analysis, AI model validation, and addressing ethical challenges in medical data use.

Course Pre-Requisites / Co-Requisites
Prior coding experience is helpful but not mandatory, ensuring the course is accessible and beneficial for students keen to navigate and contribute to the evolving landscape of medical AI.

Course Objectives
The overall objective of this course is to equip students with the theoretical and practical fundamentals necessary to design and implement statistical methods for real-world problems in medicine. Detailed learning objectives are listed below.

- Understand foundational biostatistical concepts and methods.
- Design and conduct effective experiments in medical settings.
- Analyze biomedical datasets using appropriate statistical and AI techniques.
- Learn approaches to evaluate models for medical applications.
- Critically evaluate and address ethical challenges in medical data usage.

Materials and Supply Fees
N/A

Required Textbooks and Software
Course notes and assigned readings are derived from various published sources and professional records of the course instructor. These materials will be distributed through the course website on Canvas. There will be additional reading in some weeks as listed in section “Recommended Weekly Reading Materials”.

R: R is a free open source statistical programming language. It is useful for data cleaning, analysis, and visualization. It complements workflows that require the use of other software. You can read more about the language and find documentation on The R Project for Statistical Computing. You can download R from http://www.r-project.org/. Rstudio is a recommended interface for the R software. It is also free and can be downloaded from http://www.rstudio.org.

HiPerGator: HiPerGator is the University of Florida's supercomputer. The students can utilize HiPerGator, if needed. For more information: https://www.rc.ufl.edu/about/hipergator/.

Recommended Weekly Reading Materials

1. Week 1. ASA Statement on The Role of Statistics in Data Science and Artificial Intelligence
2. Week 2. Jepsen P, Johnsen SP, Gillman MW, Sørensen HT. Interpretation of observational studies. Heart. 2004 Aug;90(8):956-60. doi: 10.1136/hrt.2003.017269. PMID: 15253985; PMCID: PMC1768356.
3. Week 4. Feder SL. Data Quality in Electronic Health Records Research: Quality Domains and Assessment Methods. West J Nurs Res. 2018 May;40(5):753-766. doi: 10.1177/0193945916689084. Epub 2017 Jan 24. PMID: 28322657.
4. Week 8. Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani. An Introduction to Statistical Learning : with Applications in R. New York :Springer, 2013. Chapter 3 Linear Regression.
5. Week 9. Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani. An Introduction to Statistical Learning : with Applications in R. New York :Springer, 2013. Chapter 4 Logistic Regression.
6. Week 11. Sanchez-Pinto LN, Luo Y, Churpek MM. Big Data and Data Science in Critical Care. Chest. 2018 Nov;154(5):1239-1248. doi: 10.1016/j.chest.2018.04.037. Epub 2018 May 9. PMID: 29752973; PMCID: PMC6224705.
7. Week 12. Bohr A, Memarzadeh K. The rise of artificial intelligence in healthcare applications. Artificial Intelligence in Healthcare. 2020:25–60. doi: 10.1016/B978-0-12-818438-7.00002-2. Epub 2020 Jun 26. PMCID: PMC7325854.
8. Week 13. Rainio, O., Teuho, J. & Klén, R. Evaluation metrics and statistical tests for machine learning. Sci Rep 14, 6086 (2024). https://doi.org/10.1038/s41598-024-56706-x
9. Week 14.
   -Mehrabi, Ninareh, Fred Morstatter, Nripsuta Saxena, Kristina Lerman, and Aram Galstyan. "A survey on bias and fairness in machine learning." ACM computing surveys (CSUR) 54, no. 6 (2021): 1-35.
   -Maseme, Mantombi. "Ethical Considerations for Health Research Data Governance." In Data Integrity and Data Governance. IntechOpen, 2022.
10. Week 15.
    -"Sample size estimation in clinical trial" by T.V, Sakpal, Perspect Clin Res. 2010 Apr;1(2):67-9. PMID: 21829786; PMCID: PMC3148614.
    -Collins, G.S., Reitsma, J.B., Altman, D.G. et al. Transparent reporting of a multivariable prediction model for individual prognosis or diagnosis (TRIPOD): the TRIPOD Statement. BMC Med 13, 1 (2015).

Course Schedule

Week	Topic	Assignment
Week 1	Introduction to Biostatistics for Artificial Intelligence in Medicine • Introduction to the course, syllabus, and objectives. • Statistical Learning • Significance of biostatistics in AI-driven medical applications • Basic biostatistical concepts and terminologies Reading: ASA Statement on The Role of Statistics in Data Science and Artificial Intelligence	
Week 2	Study Designs • Types of study designs • Characteristics of experimental study design and common designs • Randomization, stratification, blinding, and control groups • Observational study design types and characteristics • Discussion of strengths and weaknesses of observational designs compared to experimental designs Reading: Jepsen P, Johnsen SP, Gillman MW, Sørensen HT. Interpretation of observational studies. Heart. 2004 Aug;90(8):956-60. doi: 10.1136/hrt.2003.017269. PMID: 15253985; PMCID: PMC1768356.	

Week 3	Navigating Large Biomedical Datasets Data in Medicine • Types of data in medicine • Understanding data from electronic health records and other sources • Challenges of large medical datasets • Data preprocessing needs • Real-world data examples and applications	Quiz 1 (5%)
Week 4	Data Processing and Quality • Exploratory analysis and data visualization techniques • Missing data mechanisms • Imputations methods and assumptions • Preprocessing of biomedical data • Data quality Reading: Feder SL. Data Quality in Electronic Health Records Research: Quality Domains and Assessment Methods. West J Nurs Res. 2018 May;40(5):753-766. doi: 10.1177/0193945916689084. Epub 2017 Jan 24. PMID: 28322657.	
Week 5	Descriptive Statistics • Types of data in medical research • Measures of central tendency and variability • Concepts related to probability • Probability distributions and sampling distributions • Hands-on exercises using common biomedical datasets	Homework 1 Due (10%)- Exploratory analysis and visualization
Week 6	Inferential Statistics • Point estimation and confidence intervals • Hypothesis testing, p-values, and statistical significance • One-sample and two-sample hypothesis tests	Quiz 2 (5%)
Week 7	Statistical Analysis Methods • Analysis of variance (ANOVA), t-test, Fisher's exact test, Chi-square test • Non-parametric methods for analyzing skewed or non-normally distributed data • Multiple testing	Quiz 3 (5%)
Week 8	Linear Regression Models • Simple and multiple linear regression • Assumptions, model diagnostics, model fit/evaluation, interpretation, model selection • Hands-on exercises using common biomedical datasets Reading: Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani. An Introduction to Statistical Learning : with Applications in R. New York :Springer, 2013. Chapter 3 Linear Regression.	Homework 2 Due (10%)- Hypothesis Testing
Week 9	Logistic Regression Models • Measures of association and their interpretation • Binary and multinomial logistic regression • Maximum Likelihood Estimation • Assumptions, diagnostics, model evaluation, and interpretation • Hands-on exercises using common biomedical datasets	Quiz 4 (5%)

	Reading: Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani. An Introduction to Statistical Learning : with Applications in R. New York :Springer, 2013. Chapter 4 Logistic Regression.	
Week 10	Survival Analysis • Kaplan-Meier Curves and log-rank test • Cox proportional hazards model and assumptions • Measures of association and their interpretation	Homework 3 Due (10%)- Linear & Logistic Regression
Week 11	Other Statistical Analysis Methods • Generalized linear models • Propensity score regression • Discriminate analysis • Tree-based models • Mixed-effects models Reading: Sanchez-Pinto LN, Luo Y, Churpek MM. Big Data and Data Science in Critical Care. Chest. 2018 Nov;154(5):1239-1248. doi: 10.1016/j.chest.2018.04.037. Epub 2018 May 9. PMID: 29752973; PMCID: PMC6224705.	Quiz 5 (5%)
Week 12	Machine Learning Fundamentals • Introduction to machine learning • Supervised and unsupervised learning algorithms Reading: Bohr A, Memarzadeh K. The rise of artificial intelligence in healthcare applications. Artificial Intelligence in Healthcare. 2020:25–60. doi: 10.1016/B978-0-12-818438-7.00002-2. Epub 2020 Jun 26. PMCID: PMC7325854.	Homework 4 Due (10%)- Survival Analysis
Week 13	Model Validation and Evaluation • Cross-validation techniques • Bootstrapping • Model performance, calibration, and evaluation metrics for medical AI models Reading: . Rainio, O., Teuho, J. & Klén, R. Evaluation metrics and statistical tests for machine learning. Sci Rep 14, 6086 (2024). https://doi.org/10.1038/s41598-024-56706-x	Quiz 6 (5%)
Week 14	Ethical Considerations in Health Data Research • Privacy and security issues • Data ownership, use, and transparency • Reporting bias and fairness in AI-driven medicine • Reproducibility and transparency • Data privacy protection, governance, and sharing Reading: (1) Mehrabi, Ninareh, Fred Morstatter, Nripsuta Saxena, Kristina Lerman, and Aram Galstyan. "A survey on bias and fairness in machine learning." ACM computing surveys (CSUR) 54, no. 6 (2021): 1-35. (2) Maseme, Mantombi. "Ethical Considerations for Health Research Data Governance." In Data Integrity and Data Governance. IntechOpen, 2022.	Homework 5 Due (10%)- Model Validation and Evaluation
Week 15	Case Studies in AI-driven Medicine • Power and sample size calculations • Reporting Guidelines and Checklists • Real-world applications of AI and biostatistics in medicine	Project (10%)

	Reading: (1) “Sample size estimation in clinical trial” by T.V, Sakpal, Perspect Clin Res. 2010 Apr;1(2):67-9. PMID: 21829786; PMCID: PMC3148614. (2) Collins, G.S., Reitsma, J.B., Altman, D.G. et al. Transparent reporting of a multivariable prediction model for individual prognosis or diagnosis (TRIPOD): the TRIPOD Statement. BMC Med 13, 1 (2015).	

Assignments & Projects

In this course, there are four individual homework assignments, four quizzes, and one project. Each individual homework assignment will be released two weeks ahead of its actual due date.

- **For each of the four individual assignments:** These assignments will help you review concepts and methods covered and ensure you have basic practical coding knowledge to be able to perform related data processing and analysis. These assignments will require basic practical coding knowledge to perform related data processing and analysis and reporting results in a clear way.
    - Homework 1. This homework will be on Exploratory Data Analysis and Visualization and will require data processing and reporting results.
    - Homework 2. This homework will be on formulating a research hypothesis based on a provided dataset and testing hypothesis with an appropriate method, and interpreting the results,
    - Homework 3. This homework will be on linear ad logistic regression based on a provided dataset and will require developing models and reporting and interpreting the results,
    - Homework 4. This homework will be on survival analysis based on a provided dataset and will require reporting and interpreting the results,
- **Project:** You will use what you learned during the semester and submit a project report. Project will require coding for processing and analyzing data using appropriate methods and generating evaluation metrics as appropriate and reporting following guidelines. Project report needs to written including objective, data processing steps, analysis methods, results including tables and figures as appropriate and interpretation of results, and conclusions. Codes written need to be included in the report.

Evaluation of Grades*:

	Percentage of Final Grade
Homework Assignments (%10 x 5)	50%
Quiz (%5 x 6)	30%
Project	10%
Attendance and Participation	10%

Grading Policy

The following is given as an example only.

Percent	**Grade**	**Grade Points**
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33

63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

Attendance Policy, Class Expectations, and Make-Up Policy

More information on UF grading policy may be found at:
UF Graduate Catalog
Grades and Grading Policies

Attendance Policy, Class Expectations, and Make-Up Policy
Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies.
Late Assignments will not be accepted unless accompanied by a documented university sanctioned excuse.

Students Requiring Accommodations
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting 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 Evaluation
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/.

In-Class Recording
Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy

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 (https://sccr.dso.ufl.edu/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: https://counseling.ufl.edu, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

E-learning technical suppor*t*, 352-392-4357 (select option 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. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall*,* 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus*:* https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/;https://care.dso.ufl.edu.

On-Line Students Complaints*:* https://distance.ufl.edu/state-authorization-status/#student-complaint.

Course|New for request 22084

Info

Request: HMG 6XXX AI and Blockchain for Secure Hospitality Transactions (UF Jax Campus)
Description of request: Course Description: Explore the convergence of AI and blockchain in securing hospitality systems and transactions. Students design smart contracts, decentralized payment networks, and predictive AI safeguards to enhance transparency, trust, and personalization. Emphasis is placed on compliance, cybersecurity, and strategic innovation for building resilient, next-generation hospitality enterprises.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX AI and Blockchain for Secure Hospitality Transactions, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:10:49 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title AI and Blockchain for Secure Hospitality Transactions
Transcript Title AI and Blockchain for Secure H
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description explore the convergence of AI and blockchain in securing hospitality systems and transactions. Students design smart contracts, decentralized payment networks, and predictive AI safeguards to enhance transparency, trust, and personalization. Emphasis is placed on compliance, cybersecurity, and strategic innovation for building resilient, next-generation hospitality enterprises.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Inclusion of HMG 6XXX – AI and Blockchain for Secure Hospitality Transactions

The inclusion of HMG 6XXX – AI and Blockchain for Secure Hospitality Transactions as an elective course for the Master of Science in AI-Driven Hospitality and as a required course for the Certificate in Global Franchise Leadership & Innovation strengthens the program's technological foundation by addressing one of the most pressing emerging challenges in the service economy: ensuring transactional security, transparency, and trust in an increasingly data-driven operational landscape. Blockchain applications are transforming how hotels, travel platforms, restaurants, and event organizations handle payments, identity verification, smart contracts, and loyalty systems. When integrated with AI, these technologies enhance cybersecurity, streamline automation, and establish verifiable systems of record—cornerstones of resilient and ethical digital infrastructures in hospitality.

By integrating blockchain with AI-driven applications, graduates will emerge as ethical and forward-thinking innovators capable of evaluating, implementing, and leading advanced digital solutions that safeguard data integrity, enhance consumer trust, and elevate operational excellence across the hospitality enterprise of the future.

Syllabus Content Requirements All Items Included

AI and Blockchain for Secure Hospitality Transactions
HMG 6xxx | 3 Credits | Summer 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
Tuesday 3 pm -3:50 pm
Thursday 3 pm -4:55 pm

INSTRUCTOR INFORMATION

Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Explore the convergence of AI and blockchain in securing hospitality systems and transactions. Students design smart contracts, decentralized payment networks, and predictive AI safeguards to enhance transparency, trust, and personalization. Emphasis is placed on compliance, cybersecurity, and strategic innovation for building resilient, next-generation hospitality enterprises.

Course Prerequisite: None

Course Objectives & Student Learning Outcomes

Upon completion, students will:

1. Produce a comparative analysis of blockchain consensus models suitable for hospitality operations.
2. Design a prototype secure payment & booking system using AI and blockchain principles.
3. Develop a loyalty and supply chain management framework aligned with regulatory standards.
4. Evaluate cybersecurity risks and propose a multi-layered blockchain–AI defense model.
5. Present a strategic roadmap for implementing AI-blockchain technologies in a hospitality enterprise.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *AI and Blockchain in Hospitality Security* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-5-0

Suggested Books

- AI Ethics (MIT Press) – Mark Coeckelbergh ISBN 978-0262538190

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.
Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 10 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: AI-Blockchain Secure Payment Prototype
Title: "Trust by Design: Building a Secure AI–Blockchain Payment and Booking System"
Objective: Students will design and prototype a secure, AI-enhanced blockchain payment or booking system tailored for hospitality operations. This project focuses on the technical and operational foundation of trust—combining Weeks 1–8 topics on architecture, algorithms, and transactional integrity.

Scenario Development [Technical soundness and innovation]

- Select a hospitality context: hotel, resort, event venue, or travel aggregator.
- Define a *vulnerability scenario*—e.g., data tampering, fraudulent bookings, chargeback disputes, or vendor fraud.
- Outline the operational pain points and identify how blockchain + AI can solve them.

System Architecture Design [Integration of AI and blockchain principles]

- Choose a blockchain framework (e.g., Ethereum, Hyperledger, Solana) and justify your choice of consensus model (PoW, PoS, PBFT, etc.).
- Integrate an AI safeguard layer—e.g., anomaly detection, predictive fraud prevention, or customer authentication using computer vision/NLP.
- Diagram data flow from transaction initiation to immutable ledger recording.

Prototype & Simulation

- Create a conceptual prototype (mock interface or flow using Figma, Draw.io, or similar).
- Simulate a basic smart contract or payment validation process (pseudo-code or low-code tool acceptable).
- Demonstrate AI's role in detecting anomalies or flagging risks in real-time.

Compliance & Risk Analysis [Clarity and quality of architecture design & Writing]

- Identify relevant legal and ethical issues: PCI-DSS, GDPR/CCPA, AML, KYC.
- Draft a short risk-mitigation brief describing how the design ensures privacy, auditability, and regulatory compliance.

Presentation (10 minutes): Summarize key findings and future scalability

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Technical soundness and innovation 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Integration of AI and blockchain principles 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Clarity and quality of architecture design & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner

and expound foundational knowledge of event management to the discussion topics on Canvas.
Further instructions for initial posts and reply posts are found on Canvas.

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Strategic Blueprint for AI–Blockchain Transformation
Title: "Securing the Future: Enterprise Roadmap for AI–Blockchain Adoption in Hospitality"
Objective: Students will act as strategic consultants to design a comprehensive enterprise-level implementation plan that scales AI–blockchain solutions across a hospitality network. This project integrates technical, ethical, and managerial lenses to demonstrate mastery of real-world transformation.

Organizational Assessment [Innovation & Feasibility]

- Choose a hospitality enterprise (global hotel group, franchise, or supply chain network).
- Audit current security systems, payment channels, vendor management, and data architecture.
- Identify weaknesses—manual reconciliation, fraud exposure, or opaque loyalty tracking.

Strategic Solution Framework [Technical Quality]

- Propose an AI–blockchain integrated ecosystem addressing:
  - Guest payments and booking integrity
  - Supply chain transparency
  - Vendor contracts and loyalty programs
  - Cyber defense (multi-layer AI detection + blockchain immutability)
- Include architecture diagrams showing system linkages (PMS ↔ blockchain ledger ↔ AI models).

Implementation & ROI Roadmap [Business Strategy & ROI]

- Propose a 24–36 month rollout plan:
  - Pilot → scaling → global deployment.
  - Stakeholder engagement, training, and vendor onboarding.
- Quantify ROI: cost reduction, fraud prevention savings, trust metrics, guest satisfaction scores.

Governance, Compliance & Ethics Plan [Ethical & Workforce Insight]

- Develop a compliance roadmap aligned with PCI, GDPR/CCPA, and emerging blockchain regulations.

- Define ethical governance protocols for data usage, transparency, and customer rights.
- Include an immutable audit trail model to ensure regulatory readiness.

Boardroom Presentation (15–20 minutes) with visual roadmap and impact metrics.

Report (18–22 pages, single-spaced, 12-point font, APA format).

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Technical accuracy and integration depth	Good Technical accuracy and integration depth for improvement	Adequate Technical accuracy and integration depth with noticeable gaps	Limited Technical accuracy and integration depth significant oversights	No evidence of Technical accuracy and integration depth
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of Compliance and ethical rigor	Good depth of Compliance and ethical rigor with some aspects for improvement	Adequate depth of Compliance and ethical rigor with noticeable gaps	Limited depth of Compliance and ethical rigor, significant oversights	No evidence of Compliance and ethical rigor
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult

https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information

about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	AI and Blockchain in Hospitality Security	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Blockchain Architecture and Consensus Models in Hospitality	Chapter 2
Week 3	3	AI Algorithms and Machine Learning for Hospitality Operations	Chapter 3 Due Monday: Discussion 1
Week 4	4	Secure Guest Payments and Transactions	Chapter 4
Week 5	5	Smart Reservations and Booking Systems	Chapter 5 Due Monday: Discussion 2
Week 6	6	Loyalty Programs and Personalized Guest Experience	Chapter 6
Week 7	7	Supply Chain Transparency and Inventory Management	Chapter 7 Due Monday: Discussion 3
Week 8	8	Vendor Management and Procurement Smart Contracts	Chapter 8 Due Monday: Midterm Project
Week 9	9	Auditing, Compliance, and Immutable Recordkeeping	Chapter 9
Week 10	10	Cybersecurity and Fraud Prevention in Hospitality Systems	Chapter 10 Due Monday: Discussion 4
Week 11	11	Smart Contracts and Automation in Hospitality Services	Chapter 11
Week 12	12	Decentralized Ownership and Franchising Models	Chapter 12 Due Monday: Discussion 5
Week 13	13	Digital Identity Management and Guest Privacy	Chapter 13
Week 14	14	Strategic Implementation and Future Trends	Chapter 14

Week 15	15	Recorded Final Presentations Submitted	Due Friday: Final Project
Week	16	Recorded Final Presentations	

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

Course|New for request 22086

Info

Request: HMG 6XXX AI Applications in Healthcare Hospitality and Service Innovation (UF JAX Campus)
Description of request: Course Description: Equip healthcare leaders and graduate professionals with strategic frameworks to integrate hospitality, AI, robotics, and service innovation across clinical and wellness environments. Emphasis is placed on personalized experience design, ethical AI governance, operational transformation, and sustainable growth through preparing managers and CEOs to lead the future of compassionate, tech-enabled care delivery.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX AI Applications in Healthcare Hospitality and Service Innovation, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:14:48 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title AI Applications in Healthcare Hospitality and Service Innovation
Transcript Title AI Applications in Healthcare
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Equip healthcare leaders and graduate professionals with strategic frameworks to integrate hospitality, AI, robotics, and service innovation across clinical and wellness environments. Emphasis is placed on personalized experience design, ethical AI governance, operational transformation, and sustainable growth through preparing managers and CEOs to lead the future of compassionate, tech-enabled care delivery.
Prerequisites none
Co-requisites None
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – AI Applications in Healthcare Hospitality and Service Innovation

The inclusion of HMG 6XXX – AI Applications in Healthcare Hospitality and Service Innovation as an elective course within the Master of Science in AI-Driven Hospitality and as a required course for the Certificate in AI Applications in Healthcare Hospitality and Service Innovation, broadens the program's interdisciplinary reach by addressing one of the fastest-growing sectors where hospitality principles and healthcare delivery intersect. This course prepares students to apply AI, robotics, and automation to elevate patient experience, improve operational efficiency, and advance personalized service design capabilities that are increasingly in demand across hospitals, senior living communities,

wellness resorts, and medical tourism organizations.

Students develop strategic, analytical, and ethical competencies in applying AI tools, robotics, and data modeling to support evidence-based decision-making, workforce analytics, revenue optimization, and customer experience management. By incorporating this elective, the program expands its professional impact and equips graduates to serve as AI-driven innovators capable of evaluating, implementing, and leading intelligent systems across a wide spectrum of service environments—from global hotel brands and restaurant groups to healthcare, wellness, and senior living enterprises.
Syllabus Content Requirements All Items Included

AI Applications in Healthcare Hospitality and Service Innovation
HMG 6xxx | 3 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time: TBA | Monday 03:00 PM – 06:00 PM

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufhealth.org
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Equip healthcare leaders and graduate professionals with strategic frameworks to integrate hospitality, AI, robotics, and service innovation across clinical and wellness environments. Emphasis is placed on personalized experience design, ethical AI governance, operational transformation, and sustainable growth through preparing managers and CEOs to lead the future of compassionate, tech-enabled care delivery.

Course Prerequisite: None

Student Learning Outcomes

Upon successful completion, students will be able to:

1. **Produce** a strategic hospitality innovation roadmap for a healthcare enterprise, integrating AI, robotics, and sustainability metrics.
2. **Defend** a digital twin–driven simulation proposal that improves patient experience and operational KPIs in a hospital or clinic.
3. **Design** an AI-powered personalization framework for a multi-site healthcare system, including guest profile logic and privacy guardrails.
4. **Evaluate** case-based outcomes of smart hospital or wellness facility implementations, identifying success factors and areas for redesign.
5. **Present** an executive-level briefing on emerging healthcare hospitality trends and recommend culturally adaptive, tech-forward solutions.

Course Materials:

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *AI Applications in Healthcare Hospitality and Service Innovation* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-1-8

Suggested Books:

- Lv, Z. & Fersman, E. (2025). Didgital Twins: Basics and Applications. Publisher: Springer. eText ISBN: 978-3-0311140-1-4

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023-2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]
- AI Ethics (MIT Press) – Mark Coeckelbergh ISBN 978-0262538190

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Digital Twins¶

This section describes the collection of digital twin platforms available on HiPerGator. Digital twins are virtual representations of real-world objects, environments, and systems. The goal of a digital twin is to mirror the behavior and attributes of its real-world counterpart for the purposes of training, data realization, and iterative development. Research Computing provides access to

essential infrastructures, tools, and programs to facilitate the creation and visualization of digital twins.

Access to Digital Twin Programs on HiPerGator¶

Digital twins are computationally demanding and generally require dedicated resources to provide the consistent availability that is necessary for their visualization and utilization. Our solution on HiPerGator is OVX, a specialized cluster built for digital twin development and accessibility. While many programs and tools such as Unreal and Omniverse have limited compatibility with normal HiPerGator GPU resources, OVX provides low-latency access to a desktop environment that is specifically designed to handle demanding visualization and simulation efforts. Click here to learn more about OVX. Inquiries regarding OVX availability can be directed towards AI support or consulting.

Platforms for Digital Twins¶

- **Omniverse:** Omniverse is an encompassing title for a myriad of apps and tools primarily developed using the [Omniverse Kit SDK]. Omniverse apps have enabled many of the leading efforts in the field of digital twins as they provide easy access to a plethora of tools important for their creation, such as physically informed 3D environments, robust rendering and display pipelines, and a highly customizable extension system compatible with C++ and Python. For more information about Omniverse, visit Nvidia's site, or the official Omniverse documentation. Omniverse is currently supported on HiPerGator through OVX, and can most conveniently accessed through Nvidia's kit-app-template.
- **Isaac Sim:** Isaac Sim is a pre-built Omniverse application that is focused primarily on the development and simulation of robotics in physically-informed virtual environments. It allows for accessible prototyping of robotics that can be trained in realistic 3D environments and provides interfaces for simulated sensors, such as cameras, LiDAR, and contact sensors. It supports common robotics formats such as Onshape and URDF, and has APIs for communicating to ROS 2 for live connections. For more information and to download, visit Isaac Sim's official documentation. Isaac Sim is currently supported on HiPerGator through OVX.
- **Unreal Engine:** Unreal Engine is a world leader in the space of simulated 3D environments due to a consistently maintained set of powerful tools built for rendering, lighting, physical simulation, user interactivity, and so on. While not as customizable as other options, Unreal is promising as a singular solution for the construction of simulations and twins, and is backed by years of experience and strong community support. For more information about Unreal Engine or to download, visit the official Unreal Engine site. Unreal Engine is currently supported on HiPerGator through OVX.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Midterm Case Study	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final: Building a Smart Wellness Center	Report & presentation	50% (450 pts)
Total		**100% (900 pts)**

Midterm Case Study

Title: *Healing or Harming? Evaluating Hospitality Robots in an Acute-Care Hospital*

Scenario: You are a consultant hired by a metropolitan teaching hospital that deployed a fleet of delivery and sanitation robots post-COVID. Initial results improved operational efficiency, but patient satisfaction scores dipped. Staff are divided on whether automation enhances or impairs the patient experience.

- Analyze internal patient feedback, operational data, and staff interviews.
- Identify service design flaws, risks, or empathy gaps.
- Describe intelligent design and use of AI in creating solutions for balancing robotic efficiency with human-centered care. [e.g., Adding some component about how AI, integrated into a robotics platform, might enhance the use of robots in healthcare hospitality.]. Recommend a phased strategy to balance robotic efficiency with human-centered care.
- Present an annotated dashboard of performance indicators and proposed changes.

Report (10–12 pages, single-spaced, 12-point font, APA format) with SWOT analysis and implementation timeline.

Presentation (10 minutes): Summarize key findings and future scalability

Healing or Harming: Evaluating Hospitality Robots in an Acute-Care Hospital Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Analyze internal patient feedback, operational data, and staff interviews 40%	Completed all tasks required, demonstrating thorough analysis of patient feedback, operational data, and staff insights.	Completed almost all tasks with generally strong analysis and minor omissions.	Completed most tasks with adequate analysis and some noticeable gaps.	Completed some tasks with limited analysis and significant gaps.	Completed very few tasks with minimal or no meaningful analysis.
Identify service design flaws, risks, or empathy gaps 30%	Provided comprehensive explanations justifying all identified issues and insights.	Provided explanations justifying most answers with minor gaps.	Provided explanations for some answers but with noticeable omissions.	Provided explanations for only a few answers with significant gaps.	Provided no meaningful explanations or justifications.

Healing or Harming: Evaluating Hospitality Robots in an Acute-Care Hospital Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Describe intelligent design and use of AI Recommendation 20%	High-quality recommendations demonstrating strong insight, coherent organization, and minimal grammar or spelling errors.	Good-quality recommendations with generally clear writing and minor issues in organization or mechanics.	Adequate recommendations with noticeable issues in structure, clarity, grammar, or spelling.	Limited recommen-dations with significant issues in clarity, organization, grammar, or spelling.	Poor recommen-dations lacking clarity, structure, and containing multiple grammar and spelling errors.
Presentation & Communication 10%	Outstanding effort with exceptional clarity, organization, and professionalism.	Good effort with commendable clarity and organization.	Adequate effort with areas needing improvement in clarity or organization.	Limited effort with major improvements needed in quality and organization.	Minimal effort with significant deficiencies in clarity, organization, and overall quality.
Total= 100%					

Discussions: Discussions offer students the opportunity to deepen their understanding of course concepts through collaboration with peers. You are expected to approach each topic with the mindset of a healthcare manager, applying and extending foundational principles of operations management. Detailed guidelines for initial and reply posts are provided on Canvas.

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise

questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project Case Study

Title: *Building a Smart Wellness Center: Strategy Blueprint for 2030*

Scenario: A global healthcare provider wants to launch a flagship smart wellness center that integrates AI personalization, digital twins, green design, and immersive hospitality experiences. The goal: to create a preventive health destination that combines luxury, sustainability, and data-driven care.

- Include a digital twin simulation for staffing or flow optimization.
- Justify sustainability practices using ESG benchmarks and carbon impact projections.
- Present a governance framework for data privacy and ethical personalization.
- Develop an end-to-end experience strategy (check-in to check-out) incorporating AI, robotics, and service innovation.
- Propose a phased rollout plan and marketing narrative aligned with global wellness trends.

Presentation (15 minutes) with slides and visual models [Presentation & Communication]
Report (12–15 pages, single-spaced, 12-point font, APA format).

Building a Smart Wellness Center Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Digital Twin Simulation 20%	A comprehensive analysis of a well-designed smart wellness center, emphasizing staffing models and workflow optimization, with a focus on how thoughtful design enhances the experiences of patients and their families.	Comprehensive cataloging with minor omissions	Adequate cataloging with notable gaps	Limited cataloging, significant omissions	Minimal or no digital twin simulation
Sustainability Practices 15%	An exceptional evaluation of how proposed sustainability practices ensure that the smart wellness center aligns seamlessly with the organization's mission, core values, and long-term strategic objectives.	Good evaluation with some aspects for improvement	Adequate evaluation with noticeable gaps	Limited evaluation with significant oversights	No evidence of sustainability practices.

Governance Framework 15%	A comprehensive analysis of the budgetary dimensions of each care, emphasizing profitability, cost-efficiency, and financial sustainability within the smart wellness center's operational framework.	Solid governance framework with some areas for improvement	Basic governance framework with notable gaps	Limited governance framework with significant oversights	No evidence of the governance and/or operational framework.
Rollout Plan 15%	A thorough articulation of the rationale and sequential steps in the rollout plan, ensuring clear alignment with the wellness center's mission, vision, and strategic priorities.	Good identification and rollout plan with some aspects for improvement	Adequate identification and rollout plan with noticeable gaps	Limited identification and rollout plan with significant oversights	No evidence of a rollout plan.
World Wellness Trends 10%	A thoughtful evaluation of the environmental, social, and economic impacts, accompanied by actionable recommendations aligned with emerging global wellness trends.	Good evaluation of the world wellness trends with some aspects for improvement	Adequate evaluation of the world wellness trends with noticeable gaps	Limited evaluation of the world wellness trends with significant oversights	No evidence of emerging global wellness trends
Strategic Recommen-dations 15%	Strategic, evidence-based recommendations for strengthening the portfolio, incorporating innovative elements that advance the capabilities and impact of the smart wellness center.	Good recommendations with some aspects for improvement	Adequate recommen-dations with noticeable gaps	Limited recommen-dations with significant oversights	No evidence of strategic recommen-dations
Presentation 10%	Exceptional work demonstrating insightful analysis, comprehensive evaluation, and a polished presentation.	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your “Display Name” in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University’s policies. For more information about UF’s policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor’s discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Convergence of Healthcare and Hospitality – Transforming Patient Care	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	The Patient-Centered Care Paradigm in the Digital Era	Chapter 2
Week 3	3	Service Design and Operational Innovation for Hospitality	Chapter 3 Due Monday: Discussion 1
Week 4	4	Robotics and Automation – Elevating Service Efficiency and Quality ▪ Virtual nursing and patient diagnoses and education. The future of pre and post care bots and virtual agents	Chapter 4
Week 5	5	Smart Hospitals and IoT – Creating Responsive Healing Environments	Chapter 5 Due Monday: Discussion 2
Week 6	6	Digital Twins and Virtual Simulation in Healthcare Operations	Chapter 6
Week 7	7	Predictive Analytics for Proactive Patient Service ▪ Journey mapping integrates well into a patient journey for example for surgery, pre-op, post-op, post-hospital, recovery.	Chapter 7 Due Monday: Midterm Project
Week 8	8	AI-Driven Personalization and Adaptive Patient Experiences	Chapter 8 Due Monday: Discussion 3

		▪ Sentiment analysis across the entire continuum of course can lead to modification of care, service recovery Navigating the complexities of multiple payment sources and patient responsibility	
Week 9	9	Hospitality Innovations in Hospitals and Acute Care Settings	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Hospitality and Tech in Senior Care & Long-Term Living	Chapter 11 Due Monday: Discussion 4
Week 12	11	Personalized Hospitality in Private Clinics and Outpatient Centers	Chapter 12
Week 13	12	Hospitality in Wellness and Preventive Care Centers	Chapter 13 Due Monday: Discussion 5
Week 14	13	Sustainability and Ethical Stewardship in Healthcare Hospitality	Chapter 14
Week 15	14	Leadership, Culture, and Strategy for AI-Driven Hospitality	Due Friday: Final Project
Finals Week	15	Recorded Final Presentations Submitted	

Course|New for request 22070

Info

Request: HMG 6XXX AI-Driven Revenue Optimization in Hospitality (UF JAX campus)
Description of request: Course Description: Examine how artificial intelligence transforms hospitality revenue management. Students design AI-powered forecasting, pricing, and personalization models that optimize profit across channels. Through case studies and real-world applications, learners integrate data, ethics, and strategy to build sustainable, future-ready frameworks for AI adoption in revenue, marketing, and distribution decisions.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX AI-Driven Revenue Optimization in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 8:56:25 PM
Form version: 4

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title AI-Driven Revenue Optimization in Hospitality
Transcript Title AI-Driven Revenue Optimization
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year 2027
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Examine how artificial intelligence transforms hospitality revenue management. Students design AI-powered forecasting, pricing, and personalization models that optimize profit across channels. Through case studies and real-world applications, learners integrate data, ethics, and strategy to build sustainable, future-ready frameworks for AI adoption in revenue, marketing, and distribution decisions
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX AI-Driven Revenue Optimization in Hospitality as a Core Course

HMG 6XXX AI-Driven Revenue Optimization in Hospitality is a required course for both the Master of Science in AI-Driven Hospitality and the AI-Powered Hospitality Analytics certificate. As one of the most data-intensive and AI-ready domains in the service sector, revenue management provides an essential foundation for advanced analytical and strategic decision-making. This course introduces students to predictive analytics, dynamic pricing, demand forecasting, and related AI-driven methodologies that transform real-time data into informed financial strategies.

The course strengthens the analytical core of the MS program by supporting broader competencies in

AI-enhanced customer experience, workforce analytics, and operational optimization. The Master of Science in AI-Driven Hospitality is designed in alignment with the University of Florida's AI Initiative, addressing the rapidly accelerating digital transformation within the hospitality and tourism industries. The program bridges the gap between emerging AI technologies and executive-level managerial practice, preparing future leaders to effectively evaluate, adopt, and when contribute to the development of AI systems that enhance performance and innovation. Students gain strategic, analytical, and ethical fluency in applying AI tools, robotics, and data modeling to complex business challenges. While foundational technical skills are included, the program emphasizes managerial application, strategic interpretation, and leadership decision-making rather than programming. Graduates will be well-positioned to lead AI-informed revenue strategies across diverse service sectors—including global hotel brands, resorts, healthcare, sports venues, and culinary enterprises strengthening the University of Florida's national leadership in AI-driven hospitality education.
Syllabus Content Requirements All Items Included

AI-Driven Revenue Optimization in Hospitality
HMG 6xxx | 3 Credits | Fall 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
Tuesday 3 pm -3:50 pm
Thursday 3 pm -4:55 pm

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Examine how artificial intelligence transforms hospitality revenue management. Students design AI-powered forecasting, pricing, and personalization models that optimize profit across channels. Through case studies and real-world applications, learners integrate data, ethics, and strategy to build sustainable, future-ready frameworks for AI adoption in revenue, marketing, and distribution decisions.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

Upon successful completion, students will be able to:

1. **Construct** advanced AI-driven demand forecasting models that increase accuracy compared to traditional methods.
2. **Apply** dynamic pricing strategies using reinforcement learning or predictive algorithms in real-world hospitality scenarios.
3. **Evaluate** and **recommend** AI-powered RMS platforms for specific organizational contexts.
4. **Design** and **justify** AI-enhanced marketing, segmentation, and distribution strategies that maximize revenue and minimize channel costs.
5. **Critically appraise** ethical dilemmas (bias, privacy, fairness) in AI revenue optimization and **propose governance frameworks** aligned with global regulations.

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *AI-Driven Revenue Optimization in Hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-3-6

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: AI-Powered Revenue Forecasting and Dynamic Pricing Prototype
Title: "Forecasting the Future: Building AI Models for Demand and Price Optimization in Hospitality"
Objective: Students will develop a small-scale, data-driven AI model that forecasts hotel demand and recommends dynamic pricing strategies. The project bridges theory with applied AI techniques, allowing students to compare traditional models to AI-enhanced methods.

Dataset Selection & Preparation [Data preparation and methodological rigor]
- Use open-source hospitality data (e.g., STR, Expedia, or synthetic PMS data).
- Clean, preprocess, and visualize key variables: occupancy, ADR, booking lead times, seasonality, events.

Model Development [AI model performance and justification]
- Build two forecasting models:
  - A traditional time-series model (ARIMA, exponential smoothing, etc.)
  - An AI-driven model (regression, neural network, or gradient boosting).
- Compare performance metrics (e.g., MAPE, RMSE).

Dynamic Pricing Simulation [Depth of analysis and strategic interpretation]
- Integrate a simple AI pricing algorithm that adjusts rates based on forecasted demand.
- Justify algorithmic choices and pricing elasticity assumptions.
- Strategic implications for hotel revenue management

Presentation (10 minutes): Summarize key findings and future scalability

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Data preparation and methodological rigor 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
AI model performance and justification 25%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Depth of analysis and strategic interpretation 30%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Comprehensive AI Revenue Strategy & Implementation Blueprint
Title: "From Insight to Action: Designing a Full-Stack AI Revenue Optimization Strategy for a Hospitality Brand"
Objective: Students will act as AI revenue consultants for a hypothetical or real hospitality brand. They'll create a strategic blueprint integrating AI forecasting, dynamic pricing, personalization, and ethical governance for organization-wide revenue transformation.

Organizational Assessment [Innovation & Feasibility]

- Choose a hotel group, resort chain, or independent property.
- Conduct an audit of current revenue systems (PMS, CRS, RMS, CRM) and identify digital maturity gaps.

AI Integration Framework [Technical Quality]

- Design an end-to-end AI-driven revenue ecosystem:
  - Forecasting and pricing models (from midterm)
  - AI personalization for marketing and guest segmentation
  - Distribution optimization (OTA, direct channels, metasearch)
- Visualize workflow integrations between AI systems and existing platforms.

Strategic Roadmap & KPIs [Business Strategy & ROI]

- Define a 3-year AI adoption roadmap:
  - Milestones for system rollout, staff training, and ROI tracking.
- Recommend performance KPIs (RevPAR uplift, conversion rates, customer lifetime value, etc.)

Presentation (15 minutes) with slides and visual models [Presentation & Communication]
Report (12–15 pages, single-spaced, 12-point font, APA format).

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Soundness of revenue optimization and data use	Good Soundness of revenue optimization and data use for improvement	Adequate Soundness of revenue optimization and data use with noticeable gaps	Limited Soundness of revenue optimization and data use, significant oversights	No evidence of Soundness of revenue optimization and data use

Business Strategy & ROI 25%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Presentation & Communication 25%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be

addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Introduction to AI-Driven Revenue Optimization	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Theoretical Foundations of Revenue Management and AI	Chapter 2
Week 3	3	Data-Driven Decision Making in Hospitality	Chapter 3 Due Monday: Discussion 1
Week 4	4	AI Technologies and Platforms for Revenue Management	Chapter 4

Week 5	5	AI-Powered Demand Forecasting and Predictive Analytics	Chapter 5 Due Monday: Discussion 2
Week 6	6	Dynamic Pricing and Yield Management through AI	Chapter 6
Week 7	7	Customer Segmentation and Personalization Strategies	Chapter 7 Due Monday: Discussion 3
Week 8	8	AI-Driven Marketing and Sales Optimization	Chapter 8 Due Monday: Midterm Project
Week 9	9	Distribution Channel Management and OTA Strategies	Chapter 9
Week 10	10	Total Revenue Management – Beyond Rooms with AI	Chapter 10 Due Monday: Discussion 4
Week 11	11	Implementing AI Solutions – Strategy and Change Management	Chapter 11
Week 12	12	Ethics, Privacy, and Security in AI-Driven Hospitality	Chapter 12 Due Monday: Discussion 5
Week 13	13	Global Case Studies and Best Practices	Chapter 13
Week 14	14	Future Trends and Emerging Technologies	Chapter 14
Week 15	15	Recorded Final Presentations Submitted	Due Friday: Final Project
Week	16	Recorded Final Presentations	

Course|New for request 22078

Info

Request: HMG 6XXX Automation and Robotics in Hospitality Operations (UF JAX Campus)
Description of request: Course Description: Examine how automation, robotics, and AI are transforming hospitality operations and design. Students analyze ROI, sustainability, and workforce impacts while developing data-driven strategies, digital dashboards, and IoT-enabled systems. Emphasis is placed on innovation, safety, and efficiency through preparing leaders to build resilient, technology-integrated, and future-ready hospitality enterprises.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Automation and Robotics in Hospitality Operations, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:32:06 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Automation and Robotics in Hospitality Operations
Transcript Title Automation and Robotics in Hos
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Examine how automation, robotics, and AI are transforming hospitality operations and design. Students analyze ROI, sustainability, and workforce impacts while developing data-driven strategies, digital dashboards, and IoT-enabled systems. Emphasis is placed on innovation, safety, and efficiency through preparing leaders to build resilient, technology-integrated, and future-ready hospitality enterprises.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Automation and Robotics in Hospitality Operations
The proposed elective, HMG 6XXX Automation and Robotics in Hospitality Operations, is designed to complement the Master of Science in AI-Driven Hospitality by strengthening students' understanding of how automation technologies and service robotics are reshaping operational efficiency, safety, and customer engagement across the hospitality and tourism sectors. This course directly supports the program's mission to bridge the gap between advanced AI technologies and managerial practice, preparing future leaders not only to utilize but also to strategically assess and implement AI- and robotics-based solutions.

The inclusion of this course further aligns with the University of Florida's broader AI Initiative, ensuring

that graduates acquire the strategic, analytical, and ethical competencies required to lead in an era defined by intelligent automation. Students will examine real-world applications including robotic concierges, autonomous foodservice systems, AI-powered maintenance and logistics, and human–robot collaboration in guest-facing environments.

This elective equips graduates to innovate and guide AI-driven transformation across hospitality, healthcare, and related service industries. Students will be prepared to navigate the ethical, operational, and experiential dimensions of robotics integration, advancing the design and management of modern service ecosystems.
Syllabus Content Requirements All Items Included

Automation and Robotics in Hospitality Operations
HMG 6xxx | 2 Credits | Fall 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

TBA
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Examine how automation, robotics, and AI are transforming hospitality operations and design. Students analyze ROI, sustainability, and workforce impacts while developing data-driven strategies, digital dashboards, and IoT-enabled systems. Emphasis is placed on innovation, safety, and efficiency through preparing leaders to build resilient, technology-integrated, and future-ready hospitality enterprises.

Course Prerequisite: None

Student Learning Outcomes (Measurable)

Upon successful completion, students will be able to:

1. **Produce** a comprehensive automation strategy for a hospitality enterprise, supported by market data, ROI analysis, and ethical justifications.
2. **Design and present** an integrated robotics system or digital workflow model that enhances service delivery and operational efficiency.
3. **Evaluate** workforce adaptation and sustainability outcomes using advanced analytics and evidence-based frameworks.
4. **Develop** an implementation plan addressing infrastructure integration, stakeholder engagement, and risk mitigation.
5. **Defend** a future-focused innovation roadmap articulating automation's role in shaping hospitality's economic, ethical, and human dimensions.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Automation and Robotics in Hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-4-3

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term Project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Automation Opportunity Assessment & ROI Analysis

Title: Designing an Automation and Robotics Integration Proposal for a Hospitality Operation

Purpose: This project immerses students in the practical and financial dimensions of automation strategy. Acting as innovation consultants, students will identify a high-impact hospitality operation suitable for automation, conduct a feasibility analysis, and propose a data-driven automation business case supported by ROI, ESG, and workforce impact analysis.

Project Requirements:

Select a Hospitality Context [Analytical Depth]

Choose one operation or brand segment where automation could create measurable value:

- Hotel housekeeping, check-in, or concierge service
- Restaurant kitchen operations or guest ordering
- Airport lounge or baggage-handling system
- Cruise line guest services or maintenance logistics
- Event venue or convention setup automation

Clearly define:

- The operational challenge or inefficiency
- The scale and scope (single property, multi-site chain, or cruise fleet)
- The key stakeholders (guests, employees, owners, regulators)

Conduct an Opportunity Assessment [Technical Execution]

Analyze:

- Current pain points (labor shortages, service delays, safety, or sustainability)
- Technology readiness (IoT, connectivity, robotics feasibility)
- Competitive landscape (benchmarks from leading brands)
- Ethical and cultural implications (guest acceptance, workforce displacement)

Use credible data sources (market studies, white papers, or company reports).

Develop a Quantitative ROI Model [Strategic Insight & Writing]

Construct a simple but defensible financial model covering:

- Capital costs (hardware, integration, training)
- Operating costs (maintenance, software subscriptions)
- Expected returns (labor savings, energy efficiency, revenue uplift)
- Payback period, NPV, and ROI percentage

Incorporate ESG metrics—carbon reduction, safety incidents, or water/energy conservation where relevant.

Propose the Automation Strategy

Summarize the proposed system or process:

- Outline automation scope and technology mix (robots, IoT, AI, sensors, etc.)
- Describe integration with PMS/POS or property IoT systems
- Define expected guest and employee experience outcomes

Presentation (15 minutes): Summarize key findings and future scalability
Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric

	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Analytical Depth 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Technical Execution 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Strategic Insight & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Robotics System Design & Innovation Roadmap

Title: Building a Future-Ready Automation Ecosystem for a Hospitality Enterprise

Purpose: The final project synthesizes all course learnings into a strategic, technical, and ethical design challenge. Students will conceptualize a full automation ecosystem—including robotics, AI, IoT, and human integration—to enhance service quality, safety, and sustainability while preserving hospitality's human touch.

Project Requirements:

Select or Define the Hospitality Enterprise [Innovation & Feasibility]

Select one real or conceptual organization:

- Hotel/resort chain integrating autonomous housekeeping and maintenance robots
- Cruise line deploying robotic room service and predictive maintenance
- F&B group automating kitchen operations, POS, and order fulfillment
- Event venue utilizing robotic logistics, security, and guest flow optimization

Define:

- Core business model and current operational setup
- Key areas targeted for automation (e.g., service delivery, sustainability, logistics)

Design an End-to-End Automation System [Technical Quality]

Develop a system-level automation blueprint showing how different technologies connect to deliver measurable value. Include:

- IoT architecture (sensors, PMS, robotics control, cloud integration)
- Digital workflows (data collection → analytics → decision → execution)
- Robotics system design (hardware + AI + human collaboration model)
- Cybersecurity and privacy safeguards

Visualize this with a system architecture diagram.

Integration with Workforce and Guest Experience

Articulate a human-centered automation philosophy:

- Define new employee roles (e.g., robotics supervisor, guest experience tech)
- Include training, upskilling, and safety frameworks
- Describe how automation enhances—not replaces—hospitality service warmth

Sustainability and ESG Integration [Business Strategy & ROI]
Quantify or discuss how automation contributes to:

- Energy optimization (smart HVAC, lighting, maintenance schedules)
- Water conservation and waste reduction
- Labor welfare and ergonomic safety
- ESG metrics aligned to corporate sustainability goals

Implementation and Governance Roadmap
Develop a phased 24–36 month plan with milestones:

- Phase 1: Pilot and evaluation
- Phase 2: Integration and scaling across departments
- Phase 3: Continuous optimization with AI analytics Include:
- Risk management matrix (technical, cultural, operational)
- Governance and compliance protocols for data, ethics, and workforce safety

Suggested Case Options for Final Project

1. Case 1 – "Robotic Resort Operations 2030" Design a smart resort integrating autonomous housekeeping drones, predictive HVAC control, and AI-driven guest personalization dashboards.
2. Case 2 – "The Future of Cruise Line Logistics" Develop an automation roadmap for autonomous food delivery, luggage handling, and real-time predictive maintenance across multiple ships.
3. Case 3 – "Restaurant 4.0: Human-Robot Collaboration Model" Propose a hybrid service system with kitchen automation, robotic servers, and digital twins optimizing order flow and guest feedback loops.
4. Case 4 – "Sustainable Smart Hotel Initiative" Create an IoT-based automation system reducing energy and water consumption while enhancing guest comfort and ESG transparency.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 30%	Thorough Originality and practicality of automation and robotics solution	Originality and practicality of automation and robotics solution with minor omissions	Adequate Originality and practicality of automation and robotics solution with notable gaps	Limited Originality and practicality of automation and robotics solution significant omissions	Minimal or no Originality and practicality of automation and robotics solution

Technical Quality 30%	Exceptional Soundness of ML model and data use	Good Soundness of ML model and data use for improvement	Adequate Soundness of ML model and data use with noticeable gaps	Limited Soundness of ML model and data use, significant oversights	No evidence of Soundness of ML model and data use
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Presentation & Communication 20%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Automation and Robotics in Hospitality	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Strategic Imperatives and the ROI of Automation Technological Foundations: AI, Robotics and Digital Systems	Chapters 2-3 Due Monday: Discussion 1

Week 3	3	Reengineering Operations through Automation	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	Automation in Lodging and Accommodation Services	Chapters 6-7 Due Monday: Midterm Project
Week 5	5	Automation in Restaurants and Food & Beverage Operations	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Automation in Air Travel and Transportation	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Leisure and Gaming Automation: Cruise Lines and Casinos Automation in Events and Convention Services; Automation in Retail, and Hospitality Merchandising	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Sustainability and Automation in Hospitality Smart technologies for water/energy conservation & predictive maintenance	Chapter 14
Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22073

Info

Request: HMG 6XXX Crisis and Risk Communication in Hospitality (UF JAX Campus)
Description of request: Course Description: Explore AI's transformative role in hospitality crisis and risk communication. Students design AI-enabled warning, messaging, and decision-support systems while analyzing real-world crises. Emphasis is placed on ethical governance, social listening, and resilience strategies that integrate predictive analytics and generative AI to strengthen organizational preparedness and global reputation management.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Crisis and Risk Communication in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:21:34 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Crisis & Risk Communication in Hospitality
Transcript Title Crisis & Risk Communication
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Explore AI's transformative role in hospitality crisis and risk communication. Students design AI-enabled warning, messaging, and decision-support systems while analyzing real-world crises. Emphasis is placed on ethical governance, social listening, and resilience strategies that integrate predictive analytics and generative AI to strengthen organizational preparedness and global reputation management.
Prerequisites none
Co-requisites None
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Crisis & Risk Communication in Hospitality

The inclusion of HMG 6XXX – Crisis & Risk Communication in Hospitality as an elective course in the Master of Science in AI-Driven Hospitality and as a required course for the Certificate in AI-Driven Customer Experience & Digital Marketing is both timely and essential. As AI-enabled operations intersect with global challenges from cybersecurity vulnerabilities to public health emergencies leaders must excel in rapid, transparent, and data-informed communication. This course prepares students to anticipate, navigate, and recover from crises by integrating AI-driven sentiment analysis, predictive risk modeling, and automated communication tools tailored to hospitality environments.

By developing advanced communication and crisis leadership capabilities, graduates will be equipped to safeguard brand trust, maintain operational continuity, and support workforce well-being in high-stakes situations. These competencies directly complement and elevate the program's broader emphasis on innovation, analytics, and ethical leadership in an AI-driven service economy.
Syllabus Content Requirements All Items Included

Crisis & Risk Communication in Hospitality
HMG 6xxx | 2 Credits | Fall 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Explore AI's transformative role in hospitality crisis and risk communication. Students design AI-enabled warning, messaging, and decision-support systems while analyzing real-world crises. Emphasis is placed on ethical governance, social listening, and resilience strategies that integrate predictive analytics and generative AI to strengthen organizational preparedness and global reputation management.

Course Prerequisite: None

Student Learning Outcomes

By completing this course, students will be able to:

1. Produce a crisis communication plan integrating AI-driven early warning, messaging, and social listening.
2. Design and defend an AI chatbot prototype for emergency communication in a hospitality scenario.
3. Evaluate reputational crises using AI sentiment dashboards and recommend corrective actions.
4. Construct an ethical governance framework for AI use in hospitality crisis communication.
5. Synthesize insights from case studies and propose strategic AI-enabled resilience initiatives across global hospitality sectors.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Crisis and risk communication in hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-0-5

Suggested Books

- AI Ethics (MIT Press Essential Knowledge) – Mark Coeckelbergh ISBN 978-0262538190

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

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Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.
Students can earn 900 points (100%) in this class:

Assessment Tool		% value (Pt value)
Mid-term Project	Report & presentation	40% (3600 pts)
Discussions	5 discussions at 18 pts each	10% (00 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: AI-Driven Early Warning and Crisis Messaging Blueprint
Title: Designing an AI-Enabled Early Warning and Crisis Communication Strategy for a Hospitality Organization
Purpose: This midterm project tasks students with transforming traditional risk communication into a proactive, AI-augmented system. Students will design an AI-driven early warning and crisis messaging plan tailored to a hospitality brand, leveraging predictive analytics, sentiment analysis, and ethical communication design.

Project Requirements:
[Integration of AI in early warning & communication] Select a Case Context: Choose a hospitality or tourism organization (e.g., global hotel chain, cruise line, theme park, or event venue). Identify a realistic crisis or emerging risk such as a data breach, natural disaster, food safety scare, or social media backlash.
AI-Driven Early Warning Design:

- Incorporate social listening and predictive analytics for early detection.
- Map how AI (e.g., NLP, anomaly detection, or predictive modeling) identifies warning signals.

[Theoretical grounding & analytical depth] Crisis Analysis:

- Differentiate between *risk communication* (before the event) and *crisis communication* (during/after).
- Summarize the organization's vulnerabilities and key stakeholders.

[Strategic Insight & Writing] Crisis Messaging Framework:

- Create AI-assisted message templates for various channels (social media, SMS, chatbot, website).
- Ensure tone, language, and visuals are culturally and ethically appropriate.

Presentation (10 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Integration of AI in early warning & communication 30%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Theoretical grounding & analytical depth 25%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Strategic Insight & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound

foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

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Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: AI-Powered Crisis Response and Resilience System
Title: Building a Generative AI Crisis Command Center: Real-Time Risk Response for Hospitality

Purpose: The final project synthesizes all course learnings into a comprehensive, AI-enabled crisis and risk communication system. Students will design and defend an integrated prototype or strategic plan that uses AI for monitoring, message generation, decision support, and stakeholder coordination during a hospitality crisis.

Project Requirements:

[Originality and sophistication of AI design] Scenario Development: Select or invent a hospitality crisis scenario (e.g., cybersecurity breach at a resort, pandemic resurgence affecting cruise operations, or severe weather impacting guests).

AI System Design:

- Monitoring: Outline an AI-based *social listening and sentiment analytics* dashboard.
- Messaging: Use Generative AI (e.g., GPT-type models) to produce multilingual, empathetic, and brand-consistent crisis messages.
- Decision Support: Integrate predictive analytics and internal coordination tools to guide leadership decisions.

[Technical Quality] Simulation Component: Demonstrate a sample communication flow (e.g., chatbot script, emergency alert template, or dashboard screenshot).

[Ethical, legal, and cultural depth] Ethical and Cross-Cultural Analysis: Evaluate the risks of misinformation, privacy violation, cultural insensitivity, or overreliance on automation. Include a mini AI governance charter (3–5 principles).

[Realism and relevance to hospitality operations] Resilience and Future Outlook: Conclude with a forward-looking resilience roadmap, recommending how AI can strengthen the brand's preparedness, staff training, and public trust through 2030.

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Options (for Final Project)

1. Case 1 – "Hurricane Evacuation and Guest Communication in a Resort Chain" Develop a multilingual AI chatbot and dashboard to guide guests, coordinate staff, and update stakeholders during severe weather disruptions.
2. Case 2 – "Viral Outbreak Aboard a Cruise Line" Create an AI-powered sentiment analysis and real-time messaging system to manage media coverage, reassure passengers, and communicate with international health agencies.
3. Case 3 – "Cybersecurity Breach at a Luxury Hotel Brand" Build a decision-support and automated alert system using NLP and predictive analytics to manage data disclosure, customer reassurance, and online reputation recovery.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Originality and sophistication of AI design (25%)	Thorough Originality and practicality of AI design	Originality and practicality of AI design with minor omissions	Adequate Originality and practicality of AI design with notable gaps	Limited Originality and practicality of AI design significant omissions	Minimal or no Originality and practicality of AI design
Technical Quality (25%)	Exceptional Soundness of ML model and data use	Good Soundness of ML model and data use for improvement	Adequate Soundness of ML model and data use with noticeable gaps	Limited Soundness of ML model and data use, significant oversights	No evidence of Soundness of ML model and data use
Realism and relevance to hospitality operations (20%)	In-depth Clarity of implementation hospitality operation roadmap and ROI model	Solid Clarity of implementation hospitality operation roadmap and ROI model for improvement	Basic Clarity of implementation hospitality operation roadmap and ROI model with notable gaps	Limited Clarity of implementation hospitality operation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical, legal, and cultural depth (15%)	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight

Presentation & Communication (15%)	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the

top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Foundations of Crisis and Risk Communication Theory Global Crises in Hospitality – Lessons from the Past	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	The Role of AI in Hospitality and Tourism Resilience Crisis Preparedness and Risk Prevention Strategies in Hospitality	Chapters 2-3 Due Monday: Discussion 1
Week 3	3	AI for Early Warning and Risk Detection AI-Enhanced Social Listening and Reputation Management	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	AI-Powered Communication Tools and Chatbots in Emergencies	Chapters 6-7 Due Monday: Midterm Project

Week 5	5	Decision Support Systems and Internal Coordination	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Sector-Specific Challenges and Case Studies	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Global Collaboration and Industry Initiatives for Resilience	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	The Future of AI-Enhanced Crisis Communication in Hospitality	Chapter 14
Finals Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22071

Info

Request: HMG 6XXX Customer Experience and Personalization in Hospitality (UF JAX Campus)
Description of request: Course Description: Explore how AI transforms customer experience and personalization across tourism, hospitality, and events. Students design intelligent systems integrating chatbots, recommender engines, NLP, and computer vision. Emphasis is placed on ethics, privacy, and governance while developing data-driven strategies that enhance engagement, loyalty, and ROI through scalable, real-time personalization.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Advanced AI in Customer Experience and Personalization in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 8:59:47 PM
Form version: 4

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Customer Experience and Personalization in Hospitality
Transcript Title Customer Experience
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Explore how AI transforms customer experience and personalization across tourism, hospitality, and events. Students design intelligent systems integrating chatbots, recommender engines, NLP, and computer vision. Emphasis is placed on ethics, privacy, and governance while developing data-driven strategies that enhance engagement, loyalty, and ROI through scalable, real-time personalization.
Prerequisites nona
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX: Customer Experience and Personalization in Hospitality as a Core Course

The inclusion of HMG 6XXX: Customer Experience and Personalization in Hospitality as a required course for the "Master of Science in AI-Driven Hospitality" and the "AI Applications in Healthcare Hospitality and Service Innovation" certificate is essential to advancing the program's mission. Customer experience is central to the hospitality profession, and in the AI era, personalization driven by machine learning and advanced analytics has become a key source of competitive differentiation.

This course prepares students to design, evaluate, and refine AI-enhanced guest experiences through predictive analytics, sentiment modeling, and adaptive service strategies. It builds the analytical

acumen and ethical discernment required to balance technological automation with authentic human connection one of the defining leadership challenges in next-generation hospitality. By integrating both strategic insight and applied techniques, the course ensures graduates are capable of leading customer-centric innovation across diverse service environments.

Syllabus Content Requirements All Items Included

Customer Experience and Personalization in Hospitality
HMG 6xxx | 3 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
Tuesday 12:50 pm - 2:45 pm
Thursday 12:50 pm - 1:40 pm

INSTRUCTOR INFORMATION

TBA Email: TBA@ufl.edu
Office hours: M, W (10:30 AM to 12:30 PM) & by appointment.

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

Course Description:

Explore how AI transforms customer experience and personalization across tourism, hospitality, and events. Students design intelligent systems integrating chatbots, recommender engines, NLP, and computer vision. Emphasis is placed on ethics, privacy, and governance while developing data-driven strategies that enhance engagement, loyalty, and ROI through scalable, real-time personalization.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

By completing this course, students will be able to:

1. **Produce** a personalization strategy that unifies data, models, and channels with clear KPIs.
2. **Build and defend** a working prototype (chat/reco/GenAI content) with test results and guardrails.
3. **Evaluate** privacy, security, and fairness risks and **author** a mitigation plan and disclosures.
4. **Operationalize** decisioning in a reference architecture (CDP ↔ PMS/CRM) with monitoring.
5. **Propose** a 24-month, cross-functional roadmap to scale intelligent personalization globally.

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Intelligent Personalization in Tourism, Hospitality, and Events: AI-Driven Customer Experience* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-1-2

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.
Students can earn 100 points (100%) in this class:

Assessment Tool		% value (Pt value)
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Intelligent Personalization Prototype "Designing the AI Guest Companion"

Title: Design and Test a Personalized AI Experience Touchpoint

Objective: Students will design and prototype an AI-driven personalization experience (chatbot, recommender, or GenAI content tool) that improves one specific moment in the customer journey from inspiration to post-stay loyalty. This project connects early-course foundations with tangible applications of conversational AI, recommender systems, NLP, and computer vision.

Customer Journey Mapping [Clarity and depth of customer journey insight]

- Choose a hospitality or tourism brand (hotel, resort, event, cruise, or attraction).
- Map the end-to-end customer journey and identify *one* "high-leverage moment" for personalization — e.g., booking, upselling, check-in, in-stay service, or post-stay retention.

Prototype Design [Technical and creative design of AI prototype]

- Build a functional prototype using low-code AI tools (e.g., ChatGPT API, HuggingFace models, or Replit mockups).
- Options include:
  - A chatbot or concierge assistant
  - A recommender engine for F&B or room upgrades
  - A GenAI-based content recommender (social media caption generator, itinerary builder, etc.)

Experimental Design [Validity of experimental framework]

- Develop an A/B test or simulation plan showing how to measure uplift in engagement, satisfaction, or conversion.
- Define KPIs: conversion rate, NPS, dwell time, or average order value.

Presentation: Demo video or live demo (3–5 minutes)

- Presentation (10 minutes) summarizing findings and early results.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Clarity and depth of customer journey insight 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Technical and creative design of AI prototype 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Validity of experimental framework 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound

foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Strategic Blueprint — "Scaling AI Personalization Across the Enterprise"
Title: Enterprise Roadmap for AI-Driven Customer Experience and Personalization
Objective: Acting as a consulting team for a global hospitality brand, students will design a comprehensive enterprise-level personalization strategy — integrating data platforms, decisioning engines, governance, and ROI justification. This project synthesizes everything from the course, emphasizing systems thinking, ethics, and strategic leadership.

Organizational Context & Assessment [Innovation & Feasibility]
- Select a hospitality organization (real or hypothetical).
- Conduct an audit of current CRM/CDP/PMS systems, personalization capabilities, and AI maturity.
- Identify operational pain points and customer-experience gaps.

End-to-End Personalization Architecture [Technical Quality]
- Design a reference architecture showing data flow between the CDP, ML models, CRM/PMS, and customer touchpoints.
- Include:
  - Decisioning engine for next-best-action
  - Channel orchestration (email, app, web, kiosk, chatbot)
  - Real-time monitoring & re-training pipeline for drift prevention

Governance & Ethics Framework [Ethical & Workforce Insight]
- Develop a comprehensive governance plan including:
  - Data privacy (GDPR/CCPA compliance)
  - Responsible-AI oversight (bias monitoring, human-in-the-loop)
  - Transparency and guest disclosure policy
  - Content accuracy standards (for GenAI applications)

ROI & Roadmap [Business Strategy & ROI]
- Propose a 24-month implementation roadmap:
  - Phased rollout (pilot → scale)
  - Cross-functional team requirements (IT, marketing, legal, operations)
  - KPIs (ROI, RevPAR lift, conversion rates, loyalty score)
- Defend investment to a simulated executive board through a cost-benefit analysis.

Boardroom Presentation (15–20 minutes)
Report (15–20 pages, single-spaced, 12-point font, APA format).

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Depth of technical and organizational analysis	Good Depth of technical and organizational analysis for improvement	Adequate Depth of technical and organizational analysis with noticeable gaps	Limited Depth of technical and organizational analysis significant oversights	No evidence of Depth of technical and organizational analysis
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

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• Be punctual with regards to course due dates.
• Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
• Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.
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ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	AI in Tourism, Hospitality & Event Services – An Introduction	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Personalizing the Travel Customer Journey with AI	Chapter 2
Week 3	3	Conversational AI: Chatbots and Virtual Assistants	Chapter 3 Due Monday: Discussion 1
Week 4	4	Recommendation Systems and Personalization Engines	Chapter 4
Week 5	5	Computer Vision in Tourism and Hospitality	Chapter 5 Due Monday: Discussion 2
Week 6	6	Natural Language Processing & Sentiment Analysis	Chapter 6
Week 7	7	Predictive Analytics & Demand Forecasting	Chapter 7 Due Monday: Midterm Project
Week 8	8	Generative AI and Content Creation	Chapter 8 Due Monday: Discussion 3
Week 9	9	Robots vs. humans: Efficiency vs. hospitality empathy Dispute resolution F&B delivery vs. F&B service	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Information dissemination/chat bots: benefits vs. limitations	Chapter 11 Due Monday: Discussion 4
Week 12	11	Data Privacy and Security in an AI-Driven World AI Governance and Regulatory Landscape	Chapter 12
Week 13	12	Strategic Implementation of AI – From Planning to Adoption	Chapter 13 Due Monday: Discussion 5
Week 14	13	Global Case Studies of AI Innovation	Chapter 14
Week 15	14	The Road Ahead – Future Trends and Opportunities	Due Friday: Final Project
Week	15	Recorded Final Presentations Submitted	

Course|New for request 22080

Info

Request: HMG 6XXX Ethics and Governance of AI in Global Hospitality (UF JAX campus)
Description of request: Course Description: Examine the ethical, legal, and cultural dimensions of AI in global hospitality. Students evaluate privacy, bias, and accountability challenges while designing governance frameworks that ensure fairness and transparency. Emphasis is placed on human-centric service, sustainable innovation, and building responsible AI strategies aligned with global ethical and regulatory standards.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Ethics and Governance of AI in Global Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:02:58 PM
Form version: 5

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Ethics and Governance of AI in Global Hospitality
Transcript Title Ethics and Governance of AI in
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description examine the ethical, legal, and cultural dimensions of AI in global hospitality. Students evaluate privacy, bias, and accountability challenges while designing governance frameworks that ensure fairness and transparency. Emphasis is placed on human-centric service, sustainable innovation, and building responsible AI strategies aligned with global ethical and regulatory standards.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Inclusion of HMG 6XXX Ethics and Governance of AI in Global Hospitality

Including HMG 6XXX: Ethics and Governance of AI in Global Hospitality as an elective course for the Master of Science in AI-Driven Hospitality; and as a required course for the Certificate in AI Applications in Healthcare Hospitality and Service Innovation, Certificate in Global Franchise Leadership & Innovation, and Certificate in AI-Driven Customer Experience & Digital Marketing; ensures that students develop a comprehensive understanding of AI's ethical, societal, and operational impacts across service industries worldwide. As automation, robotics, and predictive analytics influence workforce dynamics, data privacy, and customer engagement, future leaders must be equipped to balance technological advancement with responsible, accountable decision-making.

This course cultivates the ethical reasoning and analytical skills necessary to identify and mitigate algorithmic bias, manage data stewardship, and design equitable and transparent AI governance systems. Through case studies, simulations, and applied projects, students learn to interpret emerging regulatory frameworks, assess compliance standards, and guide organizations toward sustainable and trustworthy AI adoption.

Syllabus Content Requirements All Items Included

Ethics and Governance of AI in Global Hospitality
HMG 6xxx | 3 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time: TBA and Wednesday 12:50 PM – 3:50 PM

INSTRUCTOR INFORMATION

Instructor: TBA
Email: TBA@ufl.edu
Office hours: M, T (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Examine the ethical, legal, and cultural dimensions of AI in global hospitality. Students evaluate privacy, bias, and accountability challenges while designing governance frameworks that ensure fairness and transparency. Emphasis is placed on human-centric service, sustainable innovation, and building responsible AI strategies aligned with global ethical and regulatory standards.

Course Prerequisite: None

Course Objectives and Student Learning Outcomes (SLOs)

Upon completion of this course, students will be able to:

1. Produce an ethical AI governance framework tailored for a global hospitality brand.
2. Defend compliance strategies for data privacy, security, and bias mitigation in AI applications.
3. Construct corporate policies and committees to embed AI ethics into decision-making.
4. Evaluate and propose hybrid service models that maintain human-centric hospitality.
5. Innovate future-ready AI governance practices that align with sustainability, CSR, and ethical standards.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Ethics and Governance of AI in Global Hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-7-4

Suggested Books

- AI Ethics (MIT Press) – Mark Coeckelbergh ISBN 978-0262538190
- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

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Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		**100% (900 pts)**

Midterm Project: AI Ethics Audit and Risk Assessment Report

Title: Evaluating the Ethical, Legal, and Cultural Risks of AI in Global Hospitality Operations

Purpose: This project allows students to apply ethical frameworks and governance principles to a real-world or hypothetical hospitality AI system. Students will investigate one AI application in the hospitality industry—such as AI-driven personalization, dynamic pricing, recruitment

algorithms, service robotics, or sentiment analytics—and conduct a comprehensive ethics audit identifying risks, stakeholders, and mitigation strategies.
The deliverable must balance ethical analysis, legal compliance, and cultural sensitivity.

Project Requirements:
Select an AI Use Case in Hospitality [Ethical analysis depth and clarity]
Possible examples:

- Facial recognition for guest check-in
- Dynamic pricing algorithm for room rates
- AI chatbot or voice assistant for guest service
- Resume-screening AI for recruitment
- Service robot deployment in luxury or airport hotels

Define:

- The purpose and scope of the AI system
- The organizational context (brand, market, region)
- The stakeholders affected (guests, employees, franchisees, regulators)

Conduct an Ethical Analysis [Legal and cultural evaluation accuracy]
Apply at least one global AI ethics framework, such as:

- OECD AI Principles
- EU AI Act guidelines
- UNESCO Recommendation on the Ethics of AI
- Singapore Model AI Governance Framework

Analyze the system's implications across:

- Autonomy and consent
- Privacy and data protection
- Bias and fairness
- Transparency and accountability
- Safety and societal impact

Legal and Regulatory Review [Practicality of risk mitigation recommendations & Writing]
Evaluate compliance risks under relevant laws:

- GDPR (Europe)
- CCPA (California)
- PIPL (China)
- Industry codes (e.g., WTTC, HTNG, or local hospitality regulations)

Summarize how data collection, storage, and use align—or conflict—with these regulations.
Cultural and Cross-Border Sensitivity
Discuss cultural differences in perceptions of AI ethics:

- How might automation, privacy, or facial recognition be received differently in Japan vs. the U.S.?
- What local norms or guest expectations must companies respect?

Risk Mitigation and Governance Recommendations
Create a 1-page "AI Risk Map" ranking ethical, operational, and reputational risks. Provide 3–5 actionable recommendations for responsible implementation. Examples:

- Introduce a human review step for sensitive AI outputs

- Require algorithmic bias testing quarterly
- Implement multilingual consent disclosures

Presentation (10 minutes): Summarize key findings and future scalability

Report (10–12 pages, single-spaced, 12-point font, APA format).

Mid-term Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Ethical analysis depth and clarity 40%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Legal and cultural evaluation accuracy 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Practicality of risk mitigation recommendations & Writing 20%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Professional quality and visuals 10%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement	Minimal effort and significant improvement needed in quality

Mid-term Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
				needed in quality	
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Ethical AI Governance Framework and Global Implementation Strategy
Title: Designing a Responsible AI Governance Framework for a Global Hospitality Organization

Purpose: This capstone integrates ethical theory, regulatory insight, and corporate governance design. Students will develop and defend a full AI governance framework for a multinational hospitality company—either a real brand (e.g., Marriott, Accor, Hilton, Hyatt, or IHG) or a hypothetical enterprise. The project emphasizes policy creation, governance architecture, and ethical leadership, preparing students to guide global firms through responsible AI adoption.

Project Requirements:

Define the Organizational Context [Strategic design and policy coherence]

Select or create a hospitality enterprise (hotel group, cruise line, resort chain, or OTA). Define:

- Company size and regions of operation
- AI use cases (e.g., dynamic pricing, predictive maintenance, guest chatbots, robot concierges)

- Key operational challenges and cultural variables

Design a Corporate AI Governance Framework [Integration of ethics, law, and cultural insight]

Your framework must include:

Core Ethical Principles: Fairness, transparency, accountability, sustainability, and human-centered design.

Governance Structure:

- AI Ethics Committee (roles, meeting cadence, oversight powers)
- Cross-functional working groups (Legal, IT, HR, Marketing, Operations)
- Reporting hierarchy (to C-suite or Board of Directors)

Governance Mechanisms:

- Algorithmic impact assessments (AIA)
- Bias testing and explainability reviews
- Incident reporting and guest grievance systems
- Regular audits and certifications

Policy and Compliance Design [Governance model clarity and feasibility]

Create policy templates or excerpts, such as:

- Responsible Data Policy: Consent, retention, anonymization
- Fairness and Non-Discrimination Policy: Internal and guest-facing commitments
- Transparency Standards: Guest disclosures for AI use
- Global Compliance Table: Mapping laws across the U.S., EU, and Asia-Pacific

Human-Centric and Workforce Ethics

Describe how the governance framework sustains hospitality's human touch:

- Ethical automation boundaries (e.g., human override rules)
- Workforce reskilling plans and inclusion of employee voice
- AI literacy and ethics training programs for staff

Global Implementation and Change Management [Human-centric and global focus]

Design a 24–36 month rollout plan with clear milestones:

- Phase 1: Pilot governance in one region or business unit
- Phase 2: Global adoption and policy harmonization
- Phase 3: Continuous monitoring, AI ethics dashboard, and reporting

Include metrics to measure success (e.g., bias reduction %, guest trust index, audit compliance rate).

Future Outlook and Continuous Improvement

Conclude with a future trends section forecasting new risks:

- Generative AI in marketing and content creation
- NeuroAI or emotion-recognition technologies
- Algorithmic sustainability scoring in ESG reports

Provide adaptive strategies for continuous ethical learning and agility.

Presentation (15 minutes) with slides and visual models [Presentation & Communication]

Report (12–15 pages, single-spaced, 12-point font, APA format).

Suggested Case Options for Final Project

1. Case 1 – "Global Resort Chain AI Ethics Charter" Develop a multi-region AI ethics governance model aligning U.S., EU, and Asia-Pacific regulations while protecting guest privacy and inclusivity.
2. Case 2 – "Responsible Robotics in Luxury Hospitality" Create a governance and audit plan for service robots ensuring transparency, safety, and equitable workforce integration.
3. Case 3 – "Hospitality Data Intelligence Platform" Propose a governance system for predictive analytics and personalization platforms, emphasizing GDPR compliance and bias testing.
4. Case 4 – "AI Ethics in Destination Marketing Organizations (DMOs)" Design ethical oversight for generative AI used in tourism campaigns, ensuring cultural representation and content authenticity.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Strategic design and policy coherence 25%	Thorough Strategic design and policy coherence	Strategic design and policy coherence with minor omissions	Adequate Strategic design and policy coherence with notable gaps	Limited Strategic design and policy coherence significant omissions	Minimal or no Strategic design and policy coherence
Integration of ethics, law, and cultural insight 25%	Exceptional Integration of ethics, law, and cultural insight	Good Integration of ethics, law, and cultural insight for improvement	Adequate Integration of ethics, law, and cultural insight with noticeable gaps	Limited Integration of ethics, law, and cultural insight significant oversights	No evidence of Integration of ethics, law, and cultural insight
Governance model clarity and feasibility 20%	In-depth Governance model clarity and feasibility	Solid Governance model clarity and feasibility for improvement	Basic Governance model clarity and feasibility with notable gaps	Limited Governance model clarity and feasibility significant oversights	No evidence of Governance model clarity and feasibility
Human-centric and global focus 15%	Comprehensive & depth of Human-centric and global focus analysis	Good depth of Human-centric and global focus analysis with some aspects for improvement	Adequate depth of Human-centric and global focus analysis with noticeable gaps	Limited depth of Human-centric and global focus analysis, significant oversights	No evidence of Human-centric and global focus

Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use

my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	AI's Transformative Impact and Ethical Imperatives	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	AI in Hospitality Today – Applications, Opportunities, and Risks	Chapter 2
Week 3	3	Foundations of Ethical AI – Principles and Frameworks for Hospitality	Chapter 3 Due Monday: Discussion 1
Week 4	4	Data Privacy and Security – Protecting Guest Information	Chapter 4
Week 5	5	Bias and Fairness – Avoiding Discrimination in AI Systems	Chapter 5 Due Monday: Discussion 2
Week 6	6	Transparency and Accountability – Explaining AI Decisions	Chapter 6
Week 7	7	Global Regulatory Landscape – Laws and Cultural Differences	Chapter 7 Due Monday: Midterm Project

Week 8	8	Hospitality Industry Standards and Best Practices – Guiding Responsible AI Use	Chapter 8 Due Monday: Discussion 3
Week 9	9	Corporate AI Governance and Strategy – Policies, Committees, and Leadership	Chapters 9-10
Week 10	Spring Break – No Class		
Week 11	10	AI and the Workforce – Ethical Impacts on Jobs and Training	Chapter 11 Due Monday: Discussion 4
Week 12	11	Human-Centric Service – Maintaining the Personal Touch in an AI Era	Chapter 12
Week 13	12	Implementing Ethical AI – From Integration to Hospitality Operation	Chapter 13 Due Monday: Discussion 5
Week 14	13	Case Studies – Successes, Failures, and Lessons Learned	Chapter 14
Week 15	14	Future Trends and Continuous Governance – Staying Ahead Ethically	Due Friday: Final Project
Week	15	Recorded Final Presentations Submitted	

Course|New for request 22079

Info

Request: HMG 6XXX Foodservice AI and Kitchen Automation (UF JAX campus)
Description of request: Course Description: Explore how AI, robotics, and automation are revolutionizing foodservice operations. Students design predictive models, digital twins, and smart kitchen systems to enhance efficiency, sustainability, and guest experience. Emphasis is placed on financial justification, workforce transformation, and ethical governance in developing scalable, future-ready AI strategies for global foodservice enterprises.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Foodservice AI and Kitchen Automation, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:01:37 PM
Form version: 4

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Foodservice AI and Kitchen Automation
Transcript Title Foodservice AI and Kitchen Aut
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description explore how AI, robotics, and automation are revolutionizing foodservice operations. Students design predictive models, digital twins, and smart kitchen systems to enhance efficiency, sustainability, and guest experience. Emphasis is placed on financial justification, workforce transformation, and ethical governance in developing scalable, future-ready AI strategies for global foodservice enterprises.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Inclusion of HMG 6XXX Foodservice AI and Kitchen Automation

The inclusion of HMG 6XXX: Foodservice AI and Kitchen Automation as an elective course within the Master of Science in AI-Driven Hospitality and as a required course for the Certificate in Culinary Innovation & Advanced Technology underscores the increasing importance of automation and intelligent systems in modern foodservice management and culinary operations. This course provides students with practical expertise in smart kitchen technologies, robotics integration, predictive maintenance, and AI-enhanced menu engineering—competencies that are rapidly becoming essential for restaurant groups, institutional food providers, and hospitality operators worldwide. By emphasizing applied innovation, the course prepares students to drive operational efficiencies, elevate

sustainability initiatives, and enhance back-of-house performance in ways that directly influence guest satisfaction and organizational competitiveness.

Graduates will emerge as forward-thinking leaders capable of guiding AI-enabled transformation across a wide spectrum of service organizations from global hotel and resort enterprises to healthcare systems, senior living facilities, and next-generation culinary and foodservice operations.
Syllabus Content Requirements All Items Included

Foodservice AI and Kitchen Automation
HMG 6xxx | 3 Credits | Spring 2027
Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
Friday 12:50 PM – 03:50 PM

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

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Course Prerequisite: None

Student Learning Outcomes
Upon completion, students will be able to:
1. Construct a strategic automation roadmap for a regional or corporate foodservice chain.
2. Analyze real-world case studies and formulate context-specific AI solutions.
3. Integrate digital twin simulations, IoT monitoring, and robotics into operational planning.
4. Present a financial justification (ROI analysis) for technology adoption to executive stakeholders.
5. Propose a sustainability- and workforce-focused innovation plan for AI-driven foodservice.

Course Materials
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Suggested Books
- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

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Total		100% (900 pts)

Midterm Project: Predictive Analytics and Smart Kitchen Simulation

Title: Designing an AI-Driven Predictive Model and Kitchen Automation Simulation for Foodservice Efficiency

Purpose: The midterm immerses students in data-driven innovation for kitchen and foodservice management. Acting as AI operations analysts, students will identify inefficiencies within a foodservice setting and design a predictive or simulation-based solution using AI and automation principles. Students will apply concepts from predictive analytics, IoT integration, and digital twins to propose measurable operational improvements (e.g., reducing food waste, optimizing staffing, or improving throughput).

Project Requirements:

Select a Foodservice Context [Clarity of problem identification and model design]

Choose a relevant operational setting such as:

- Full-service restaurant or quick-service chain
- Campus or hospital cafeteria
- Airline catering or cruise ship galley
- Hotel banquet kitchen
- Ghost/delivery kitchen network

Define the key problem (e.g., overproduction, long ticket times, excess energy use, low labor productivity).

Develop a Predictive Model or Simulation Concept [Integration of AI, IoT, or simulation components]

Using real, public, or simulated data, design one of the following:

- Predictive Model: For menu demand, staffing needs, or inventory optimization.
- Digital Twin: Simulating kitchen workflows, queue times, or energy use.

Outline:

- Input variables (sales, prep time, shift schedules, temperature logs, etc.)
- Data pipeline and model type (regression, ML forecasting, or simulation)
- Key metrics: waste %, throughput time, revenue, or labor cost reduction.

Automation & IoT Integration

Explain how your solution connects with: [Data-driven insights and performance metrics & Writing]

- Smart kitchen sensors (temperature, humidity, or occupancy)
- Automated cooking or cleaning systems
- Connected dashboards or POS integrations

Demonstrate how these systems enable predictive maintenance, quality control, or resource savings.

- Fairness and safety: How automation impacts line cooks and supervisors.
- Training needs: Required reskilling for AI-ready kitchens.
- Financial feasibility: Estimated ROI (capital cost, payback period, and savings potential).

Presentation (10 minutes): Summarize key findings and future scalability

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
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Clarity of problem identification and model design 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Integration of AI, IoT, or simulation components 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Data-driven insights and performance metrics & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
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Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Strategic AI and Automation Roadmap for a Foodservice Enterprise

Title: Building a Scalable AI and Robotics Transformation Plan for a Global or Multi-Unit Foodservice Operation

Purpose: The final project synthesizes all course concepts—data analytics, robotics integration, ESG frameworks, and workforce strategy—into a comprehensive automation roadmap. Students act as Chief Automation Officers presenting a strategic blueprint to executives or investors for scaling AI-driven foodservice transformation.

Project Requirements:

Select an Organization [Innovation & Feasibility]

Choose one of the following (real or hypothetical):

- Global quick-service brand (e.g., McDonald's, Chipotle, Domino's)
- Corporate or institutional foodservice (airline, cruise line, hospital, or campus)
- Hotel chain F&B division
- Robotics startup entering the hospitality market

Define:

- Operational scope: How many units or regions?
- Strategic focus: Cost efficiency, sustainability, labor resilience, or guest personalization.

Design an End-to-End Automation Ecosystem [Technical Quality]

Develop a system-level architecture that integrates:

- Kitchen robotics and automation (cooking, plating, cleaning)
- Predictive analytics for labor and inventory planning
- IoT systems for real-time monitoring (food safety, energy management)
- Digital twins for scenario modeling (kitchen redesign, energy optimization)
- Generative AI for menu personalization or recipe design

Visualize this using a diagram showing data flow from sensors → AI engine → human decision-making. [Business Strategy & ROI]

Financial and ESG Analysis

Provide a business justification section that includes:

- ROI projection with key assumptions
- Cost-benefit analysis (labor savings, waste reduction, increased throughput)

- ESG integration: how automation reduces emissions, waste, or energy usage
- Alignment with UN Sustainable Development Goals (SDGs)

Design a 24–36 month phased implementation plan:

- Phase 1: Pilot in one property or kitchen cluster
- Phase 2: Regional rollout with data feedback loops
- Phase 3: Global scale-up and continuous AI refinement

Include a timeline and KPIs for each phase (e.g., reduction in food waste %, energy savings, service time improvement).

Workforce and Change Management Plan [Ethical & Workforce Insight]

Develop a reskilling and human–AI collaboration plan:

- Identify skill gaps (AI literacy, robotics maintenance, safety compliance).
- Outline training programs and digital certification models.
- Include strategies to maintain morale and preserve "hospitality touch."

Governance and Ethical Framework

Include a section addressing:

- Food safety and data governance (AI traceability, IoT security).
- Ethical robotics deployment (guest privacy, algorithmic bias).
- Legal compliance (OSHA, FDA, and international standards).

Global Scalability and Future Roadmap

Suggested Case Options for Final Project

1. Case 1 – "Smart Cloud Kitchen 2030" Design a fully automated, data-driven cloud kitchen network integrating predictive inventory systems, AI menu design, and robotics-enabled prep lines.
2. Case 2 – "Cruise Line Culinary Automation Strategy" Build an AI and robotics integration roadmap to improve safety, consistency, and sustainability across fleet kitchens.
3. Case 3 – "GreenPlate: Sustainable Quick-Service AI Transformation" Create an AI-driven roadmap reducing food waste by 30% through smart sensors, automated cooking, and digital twins for energy management.
4. Case 4 – "Hotel Banquet Kitchen of the Future" Design a predictive, multi-robot kitchen model that automates menu production for large-scale events while preserving food artistry and service quality.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Strategic and technical depth of automation plan	Strategic and technical depth of automation plan with minor omissions	Adequate Strategic and technical depth of automation plan with notable gaps	Limited Strategic and technical depth of automation plan significant omissions	Minimal or no Strategic and technical depth of automation plan

Technical Quality 25%	Exceptional Integration of AI, IoT, and robotics systems	Good Integration of AI, IoT, and robotics systems for improvement	Adequate Integration of AI, IoT, and robotics systems with noticeable gaps	Limited Integration of AI, IoT, and robotics systems, significant oversights	No evidence of Integration of AI, IoT, and robotics systems
Business Strategy & ROI 20%	In-depth Financial, ESG, and ROI justification	Solid Financial, ESG, and ROI justification for improvement	Basic Financial, ESG, and ROI justification with notable gaps	Limited Financial, ESG, and ROI justification significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of ethical, privacy, and governance structure	Good depth of ethical, privacy, and governance structure with some aspects for improvement	Adequate depth of ethical, privacy, and governance structure with noticeable gaps	Limited depth of ethical, privacy, and governance structure, significant oversights	No evidence of ethical, workforce insight and governance structure
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.

• Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
• Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

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COURSE SCHEDULE

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Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Introduction to AI-Driven Foodservice Operations	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Data-Driven Decision Making and Predictive Analytics in Foodservice	Chapter 2
Week 3	3	Kitchen Robotics and Automated Equipment	Chapter 3 Due Monday: Discussion 1
Week 4	4	IoT and Smart Kitchen Technologies	Chapter 4

Week 5	5	Digital Twins and Simulation for Kitchen Optimization	Chapter 5 Due Monday: Discussion 2
Week 6	6	Autonomous Delivery and Service Robots in Foodservice	Chapter 6
Week 7	7	Generative AI for Menu Development and Personalization	Chapter 7 Due Monday: Midterm Project
Week 8	8	AI for Food Safety and Quality Control	Chapter 8 Due Monday: Discussion 3
Week 9	9	Sustainable Operations and Waste Reduction with AI	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Strategic Implementation and Change Management for Automation	Chapter 11 Due Monday: Discussion 4
Week 12	11	ROI and Financial Considerations of Kitchen Automation	Chapter 12
Week 13	12	Workforce Reskilling and Human–AI Collaboration	Chapter 13 Due Monday: Discussion 5
Week 14	13	Global Case Studies and Regional Perspectives	Chapter 14
Week 15	14	Future Outlook and Emerging Trends in Foodservice Automation	Due Friday: Final Project
Week	15	Recorded Final Presentations Submitted	

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

Course|New for request 22069

Info

Request: HMG 6XXX Hospitality Big Data & Machine Learning (UF JAX campus)
Description of request: Course Description: Explore the intersection of hospitality, big data, and machine learning. Students learn to analyze diverse data sources, design AI-driven decision systems, and apply predictive analytics for pricing, marketing, and personalization. Emphasis is placed on ethics, robotics, and sustainable innovation to shape the AI-powered hospitality enterprise of the future.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Hospitality Big Data & Machine Learning, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 8:50:40 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Hospitality Big Data & Machine Learning
Transcript Title Hospitality Big Data & Machine
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year 2026
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Explore the intersection of hospitality, big data, and machine learning. Students learn to analyze diverse data sources, design AI-driven decision systems, and apply predictive analytics for pricing, marketing, and personalization. Emphasis is placed on ethics, robotics, and sustainable innovation to shape the AI-powered hospitality enterprise of the future.
Prerequisites none
Co-requisites None
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Hospitality Big Data & Machine Learning as a Core Course

The inclusion of HMG 6XXX – Hospitality Big Data & Machine Learning as a required course for both the Master of Science in AI-Driven Hospitality and the AI-Powered Hospitality Analytics certificate is fundamental to achieving the program's mission. This course provides students with the analytical foundation necessary to collect, interpret, and apply large-scale data in decision-making across core functional areas, including revenue management, operational efficiency, customer behavior modeling, and market forecasting.

Students gain a deep understanding of how predictive analytics, machine learning techniques, and data visualization support evidence-based leadership in hospitality. While the course introduces

essential technical competencies, its primary emphasis is on managerial application by guiding students to translate complex datasets into clear, actionable insights that support strategic decisions.

This applied approach ensures that graduates are prepared to leverage AI-driven analytics to enhance innovation, optimize workforce performance, and elevate personalized guest experiences. By requiring Hospitality Big Data & Machine Learning, the program guarantees that every graduate possesses the quantitative literacy, data fluency, and analytical leadership needed to excel in an AI-enabled service economy.

Syllabus Content Requirements All Items Included

Hospitality Big Data & Machine Learning
HMG 6xxx | 3 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
TBA, Tuesday 3 pm -3:50 pm
TBA, Thursday 3 pm -4:55 pm

INSTRUCTOR INFORMATION

TBA Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Explore the intersection of hospitality, big data, and machine learning. Students learn to analyze diverse data sources, design AI-driven decision systems, and apply predictive analytics for pricing, marketing, and personalization. Emphasis is placed on ethics, robotics, and sustainable innovation to shape the AI-powered hospitality enterprise of the future.

Course Prerequisite: None

Student Learning Outcomes (SLOs)
Upon successful completion, students will:
1. Produce a comprehensive analysis of a hospitality data ecosystem and recommend governance practices.
2. Design and present an AI-enhanced revenue management or personalization solution for a hospitality case.
3. Construct a dashboard or model demonstrating predictive or descriptive analytics using real or simulated hospitality data.
4. Evaluate ethical and security challenges in AI projects and propose mitigation strategies.
5. Formulate a forward-looking innovation plan for AI adoption in a hospitality enterprise.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Hospitality Big Data & Machine Learning* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. E-Text ISBN: 979-8-9940150-0-1

Suggested Books

- Introduction to Machine Learning (4th ed.) – Ethem Alpaydın, MIT Press, 2020 ISBN 978-0262043793
- Probabilistic Machine Learning: An Introduction – Kevin P. Murphy, MIT Press, 2022 ISBN 978-0262046824
- Probabilistic Machine Learning: Advanced Topics – Kevin P. Murphy, MIT Press, 2023 ISBN 978-0262048439
- Lv, Z. & Fersman, E. (2025). Didgital Twins: Basics and Applications. Publisher: Springer. eText ISBN: 978-3-0311140-1-4
- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course:

https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final analysis	Project & presentation	50% (450 pts)
Total		100% (900 pts)

MIDTERM PROJECT

Title: ***Hospitality Data Ecosystem Analysis & Predictive Insights***

Objective: Students will analyze a selected hospitality enterprise (e.g., hotel, resort, cruise line, or restaurant chain) to evaluate its data ecosystem, identify opportunities for AI integration, and build a small-scale predictive model for a chosen operational or marketing goal.

Data Ecosystem Report [Analytical Depth]

- Identify key internal and external data sources (PMS, CRM, POS, OTA, social media, sensors, etc.).
- Assess data quality, ownership, governance practices, and interoperability.
- Recommend a governance framework for data accuracy, privacy, and integration.

Predictive Model & Dashboard [Technical Execution]

- Using Python, R, or BI software (e.g., Power BI, Tableau), design a dashboard visualizing key metrics.
- Build a small predictive model (regression, classification, or clustering) addressing one hospitality-specific problem—such as:
  - Guest satisfaction prediction
  - Dynamic staffing forecasts
  - Booking cancellation prediction
  - Upsell potential estimation
- Use simulated or open-source hospitality datasets (e.g., Kaggle, STR, Expedia)

Featured Recommendations, Operational, Business, and/or Service Decisions [Strategic Insight & Writing]

Presentation

- 10-minute presentation summarizing findings, model results, and implications for management decisions.
- Include ethical considerations and privacy safeguards in data use. Learning Goals Addressed

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Analytical Depth 25%	Exceptional Clarity and accuracy of data ecosystem analysis Completed all steps required by the assignment	Good quality of Clarity and accuracy of data ecosystem analysis Completed almost all steps required by the assignment	Adequate quality of Clarity and accuracy of data ecosystem analysis Completed most steps required by the assignment	Limited quality of Clarity and accuracy of data ecosystem analysis Completed some steps required by the assignment	Poor quality of Clarity and accuracy of data ecosystem analysis Completed only a few steps required by the assignment
Technical Execution 30%	Exceptional Quality and functionality of predictive model/dashboard Provided sufficient explanations justifying all answers	God Quality and functionality of predictive model/dashboard Provided explanations justifying most answers	Adequate Quality and functionality of predictive model/dashboard Provided explanations justifying some answers	Limited Quality and functionality of predictive model/dashboard Provided explanations justifying a few answers	Poor Quality and functionality of predictive model/dashboard Did not provide explanations justifying any answers
Strategic Insight & Writing 25%	Exceptional Relevance to operational or business/service decisions High-quality writing with proper use of sentences, paragraphs, and minimal grammar	Good quality of Relevance to operational or business/service decisions Good-quality writing with some minor issues in sentences, paragraphs,	Adequate quality of Relevance to operational or business/service decisions Adequate quality of writing with noticeable issues in sentences,	Limited quality of Relevance to operational or business/service decisions Limited quality of writing with significant issues in sentences, paragraphs,	Poor quality of Relevance to operational or business/service decisions Poor quality of writing, lacking proper sentences, paragraphs, and containing

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
	and spelling errors	grammar, and spelling	paragraphs, grammar, and spelling	grammar, and spelling	multiple grammar and spelling errors
Presentation 20%	Exceptional quality of Clarity, professionalism, and visual communication Outstanding effort and exceptional quality of work	Good quality of Clarity, professionalism, and visual communication Good effort and commendable quality of work	Adequate quality of Clarity, professionalism, and visual communication Adequate effort with room for improvement in quality	Limited quality of Clarity, professionalism, and visual communication Limited effort with considerable improvement needed in quality	Poor quality of Clarity, professionalism, and visual communication Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

FINAL PROJECT

Title: AI-Driven Hospitality Innovation Capstone: Strategy, Model & ROI Framework

Objective: Students will work in small teams to design, justify, and prototype an AI-powered solution that advances guest experience, operational efficiency, or sustainability within the hospitality industry. This project synthesizes the entire course from data strategy to AI implementation and ethical foresight.

Project Proposal [Innovation & Feasibility]

- Define the business problem and the role of AI/big data in solving it.
- Include literature review and benchmarking against current industry practices.

Solution Architecture & Model [Technical Quality]

- Design and prototype one of the following (or approved equivalent):
  - AI-driven dynamic pricing engine
  - Predictive demand forecasting dashboard
  - Guest experience personalization system (using LLMs or recommender systems)
  - Smart-hotel IoT analytics platform
  - Employee performance optimization via robotics/AI integration
- Include workflow diagrams, data flow, and model selection justification.

Implementation & ROI Roadmap [Business Strategy & ROI]

- Outline the pilot project timeline, required resources, and key performance indicators (KPIs).
- Build an ROI estimation framework, including financial, operational, and sustainability metrics.

Ethics, Privacy & Workforce Impact Analysis [Ethical & Workforce Insight]

- Address data protection, algorithmic bias, transparency, and employee retraining strategies.
-

Final Presentation [Presentation & Communication]

- 15-minute professional presentation (in-class or virtual) with demo/video walkthrough.
- Audience: industry guests, faculty, and peers.

Report (12–15 pages, single-spaced, 12-point font, APA format).

Suggested Tools & Datasets

- Tools: Python (scikit-learn, pandas), RapidMiner, Power BI, Tableau, AWS AI Suite, Google Colab, TensorFlow
- Datasets: Expedia Hotel Recommendations, STR Data, Kaggle "Hotel Booking Demand," Booking.com reviews, simulated IoT hotel sensor data

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Soundness of ML model and data use	Good Soundness of ML model and data use for improvement	Adequate Soundness of ML model and data use with noticeable gaps	Limited Soundness of ML model and data use, significant oversights	No evidence of Soundness of ML model and data use
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

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- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

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ACADEMIC POLICIES & RESOURCES

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Week 2	2	Hospitality Data Sources and Management	Chapter 2
Week 3	3	Business Intelligence and Descriptive Analytics in Hospitality	Chapter 3 Due Monday: Discussion 1
Week 4	4	Machine Learning Fundamentals for Hospitality Applications	Chapter 4
Week 5	5	AI-Driven Revenue Management and Demand Forecasting	Chapter 5 Due Monday: Discussion 2
Week 6	6	Marketing Analytics and Customer Personalization in Hospitality	Chapter 6
Week 7	7	Enhancing Guest Experience with AI and Robotics	Chapter 7 Due Monday: Midterm Project
Week 8	8	AI for Operational Efficiency and Automation	Chapter 8 Due Monday: Discussion 3
Week 9	9	Robotics and Service Automation in Hospitality	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Internet of Things (IoT) and Smart Hotels	Chapter 11 Due Monday: Discussion 4
Week 12	11	Tools, Platforms, and Software for Hospitality Analytics	Chapter 12
Week 13	12	Implementing AI in Hospitality Businesses	Chapter 13 Due Monday: Discussion 5
Week 14	13	Data Privacy, Ethics, and Security in Hospitality AI	Chapter 14
Week 15	14	Future Trends and Innovations in AI-Driven Hospitality	Due Friday: Final Project
Week	15	Recorded Final Presentations Submitted	

Course|New for request 22076

Info

Request: HMG 6XXX Hospitality Franchise Management (UF JAX campus)
Description of request: Course Description: Explore advanced strategies in hospitality franchising, from market expansion and brand management to financial modeling and global operations. Students design data-driven growth plans, negotiate franchisor–franchisee agreements, and integrate ESG and digital transformation initiatives, developing investor-ready frameworks that enhance profitability, brand equity, and sustainable global franchise success.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Hospitality Franchise Management, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 11/24/2025 2:03:53 AM
Form version: 2

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Hospitality Franchise Management
Transcript Title Hospitality Franchise Manageme
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description explores advanced strategies in hospitality franchising, from market expansion and brand management to financial modeling and global operations. Students design data-driven growth plans, negotiate franchisor–franchisee agreements, and integrate ESG and digital transformation initiatives, developing investor-ready frameworks that enhance profitability, brand equity, and sustainable global franchise success.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Hospitality Franchise Management

The inclusion of HMG 6XXX Hospitality Franchise Management as an elective course within the Master of Science in AI-Driven Hospitality and as a required course for Certificate 3: Global Franchise Leadership & Innovation provides students with the essential knowledge and competencies needed to lead in franchise strategy, operations, and innovation. By integrating data-driven insights with AI-enhanced decision frameworks, the course prepares students to navigate the increasingly complex landscape of global franchise systems.

As contemporary franchise models accelerate their adoption of automation, predictive analytics, and

digital branding ecosystems, this course ensures that graduates are equipped to manage the evolving intersection of AI, entrepreneurship, and global brand leadership. Students gain the strategic, analytical, and operational capabilities necessary to guide franchise organizations toward sustainable growth and competitive advantage in an AI-enabled future.

Syllabus Content Requirements All Items Included

Hospitality Franchise Management
HMG 6xxx | 2 Credits | Summer 2027
Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Explore advanced strategies in hospitality franchising, from market expansion and brand management to financial modeling and global operations. Students design data-driven growth plans, negotiate franchisor–franchisee agreements, and integrate ESG and digital transformation initiatives, developing investor-ready frameworks that enhance profitability, brand equity, and sustainable global franchise success.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

Upon successful completion of this course, students will be able to:

1. Produce an investor-ready Franchise Investment Memorandum with financial, legal, and operational justification.
2. Establish a recommended entry mode and partner strategy for an international market using evidence-based reasoning.
3. Evaluate a franchise performance management system (dashboards, SOPs, QA cadence) to improve profitability and guest satisfaction.
4. Draft and negotiate term-sheet clauses that align incentives and minimize franchisor–franchisee conflict.
5. Lead a system-wide crisis response and post-crisis evaluation that sustains brand equity and accelerates recovery.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Hospitality Franchise Management* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-2-5

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term Project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Franchise Market Entry Strategy & Term Sheet Negotiation
Title: Designing a Franchise Market Entry and Negotiation Framework for a Hospitality Brand

Purpose: This midterm project challenges students to integrate market analysis, franchise modeling, and negotiation strategy into a coherent, data-backed franchise development plan. Students act as franchise development consultants hired to identify, justify, and structure a market entry for a hospitality brand.

Project Requirements:

Select a Brand and Market Context [Market analysis and franchise model selection]

Choose one hospitality brand (real or hypothetical) and one new market or region for expansion. Examples:

- Marriott expanding a select-service brand into Vietnam
- Chick-fil-A entering Western Europe
- CitizenM scaling micro-hotels into U.S. mid-tier cities
- A boutique resort brand franchising in the Caribbean

Clearly define:

- Brand positioning and value proposition
- Target market and demand drivers
- Competitive landscape (existing chains, local players, market gaps)

Franchise Entry Analysis [Financial and ROI justification]

- Evaluate white-space opportunities using market, demographic, and tourism data.
- Determine appropriate franchise model (single-unit, area development, or master franchise) and justify the choice.
- Estimate capital investment, ROI timeline, and payback for both franchisor and franchisee.

Franchise Term Sheet Development [Quality and clarity of term sheet]

Draft a simplified franchise term sheet including:

- Franchise fee, royalty rate, and advertising fund contribution
- Territory rights and exclusivity
- Training, technology, and marketing support
- Performance standards and non-compliance penalties
- Renewal, exit, and dispute resolution terms

Negotiation Simulation [Negotiation strategy and realism]

Simulate a franchisor–franchisee negotiation where students demonstrate their ability to balance compliance and incentive alignment.

- Students may record a brief negotiation roleplay or present their rationale for final contract terms.
- The negotiation must highlight risk management, ROI justification, and relationship-building tactics.

Presentation (10 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Market analysis and franchise model selection 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Financial and ROI justification 20%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Quality and clarity of term sheet 20%	Exceptional Quality of clarity of term sheet	Good Quality of clarity of term sheet	Adequate Quality of clarity of term sheet	Limited Quality of clarity of term sheet	Poor Quality of clarity of term sheet
Negotiation strategy and realism 20%	Exceptional quality of Negotiation strategy and realism	Good quality of Negotiation strategy and realism	Adequate quality of Negotiation strategy and realism	Limited quality of Negotiation strategy and realism	Poor quality of Negotiation strategy and realism
Presentation and professionalism 15%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Franchise Investment Memorandum & Global Strategy Roadmap
Title: Building an Investor-Ready Global Franchise Growth Blueprint for a Hospitality Brand

Purpose: This capstone project synthesizes all course components such as finance, legal, branding, technology, and ESG into a comprehensive Franchise Investment Memorandum and Global Growth Roadmap. Students design a scalable, evidence-based model that could realistically attract investors or strategic partners.

Project Requirements: Brand Selection & Global Vision
[Strategic and financial depth] Select a hospitality brand (real or conceptual) and outline its next 3–5 years of global expansion strategy. Identify:

- Core brand DNA and differentiators
- Target markets and rationale
- ESG commitments and digital transformation priorities

Comprehensive Franchise Financial Model
Develop a financial framework simulating franchise performance, including:

- Franchise fee, royalty, and ad fund structure
- Unit-level P&L (occupancy, ADR, GOP, owner ROI)
- Sensitivity analysis (best-case, base-case, worst-case)
- Franchisor cash flow and EBITDA growth projections

Visualize results in tables or dashboards that communicate financial logic clearly.

[Legal, compliance, and ESG integration] Legal and Compliance Framework
Summarize how the brand will ensure compliance and mitigate risk across markets:

- Key FDD elements and disclosure standards
- International franchising laws and joint-employer risks
- Contractual clauses for data protection, ESG, and digital brand standards

Digital Transformation and ESG Integration
Explain how technology, automation, and sustainability enhance the franchise system's competitiveness and profitability:

- Guest-facing AI or IoT solutions

- Predictive analytics for performance management
- ESG-linked franchise scorecards (energy, labor, diversity)

[Clarity of financial modeling and KPIs] Global Rollout and Governance
Develop a 24–36 month phased roadmap including:

- Phase 1: Pilot franchise and validation (select market)
- Phase 2: Regional master franchise or JV partnerships
- Phase 3: Global expansion with QA, audit cadence, and tech scaling
- Include a governance chart showing franchisor support structure, QA, and audit intervals
- Stating and clarifying financial modeling and KPIs

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Options for Final Project

1. Case 1 – "EcoLuxe Hotels: ESG-Driven Franchise Growth in Asia-Pacific" Develop an investor-ready franchise roadmap focused on green certifications and digital guest engagement.
2. Case 2 – "UrbanStay: Midscale Lifestyle Hotel Expansion in Tier-2 U.S. Cities" Create a financial and operational model for market penetration using a hybrid franchise and management contract system.
3. Case 3 – "GlobalBean Coffee: Master Franchise Strategy for the Middle East" Design a culturally localized brand adaptation and master franchise deal with financial and legal safeguards.
4. Case 4 – "Haven Resorts International: Data-Driven Expansion into Europe" Integrate predictive analytics, brand compliance tech, and ESG alignment into a global expansion plan.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Strategic and financial depth 30%	Exceptional Strategic and financial depth	Good Strategic and financial depth for improvement	Adequate Strategic and financial depth with noticeable gaps	Limited Strategic and financial depth significant oversights	No evidence of Strategic and financial depth

Legal, compliance, and ESG integration 20%	Legal, compliance, and ESG integration	Good Legal, compliance, and ESG integration for improvement	Legal, compliance, and ESG integration with noticeable gaps	Limited Legal, compliance, and ESG integration	No evidence of Legal, compliance, and ESG integration
Clarity of financial modeling and KPIs 30%	Clarity of financial modeling and KPIs	Good Clarity of financial modeling and KPIs for improvement	Clarity of financial modeling and KPIs with noticeable gaps	Limited Clarity of financial modeling and KPIs significant oversights	No evidence of Clarity of financial modeling and KPIs
Presentation & Communication 20%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let

me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Franchise Development and Expansion Strategies Franchise Operations and Performance Management	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Brand Strategy and Brand Management in Franchising	Chapters 2-3 Due Monday: Discussion 1
Week 3	3	Franchisor–Franchisee Relations and Leadership	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	Franchise Finance and Unit Economics	Chapters 6-7 Due Monday: Midterm Project

		Legal, Regulatory and Compliance Frameworks in Franchising	
Week 5	5	International Expansion and Global Franchise Strategy	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Franchising in the Hospitality Businesses	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Digital Transformation and Innovation in Hospitality Franchising	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Crisis Management and Resilience in Hospitality Franchising	Chapter 14
Finals Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22083

Info

Request: HMG 6XXX Innovations in Restaurant Tech & Design (UF Jax Campus)
Description of request: Course Description: Explore how AI, automation, and design innovation are reshaping modern restaurants. Students integrate data from POS, IoT, and CRM systems to engineer smart kitchens, immersive dining environments, and sustainable operations. Emphasis is placed on ROI modeling, workforce technology, and future-ready design strategies for intelligent, profitable restaurant ecosystems.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Innovations in Restaurant Tech & Design, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:09:03 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Innovations in Restaurant Tech & Design
Transcript Title Innovations in Restaurant Tech
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description explore how AI, automation, and design innovation are reshaping modern restaurants. Students integrate data from POS, IoT, and CRM systems to engineer smart kitchens, immersive dining environments, and sustainable operations. Emphasis is placed on ROI modeling, workforce technology, and future-ready design strategies for intelligent, profitable restaurant ecosystems.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum The inclusion of HMG 6XXX – Innovations in Restaurant Tech & Design as an elective course within the Master of Science in AI-Driven Hospitality and as a required course for Certificate 4: Culinary Innovation & Advanced Technology is integral to advancing the program's mission. This course enables students to examine the intersection of artificial intelligence, automation, and experiential design within contemporary foodservice environments. As restaurants increasingly adopt robotics, smart kitchen systems, IoT-integrated operations, and data-informed menu strategies, future leaders must understand both the operational and design implications of technological transformation.

The course equips students to conceptualize, analyze, and evaluate AI-enhanced restaurant models that drive efficiency, promote sustainability, and elevate customer satisfaction. Through an applied and

forward-looking approach, students gain the knowledge required to lead innovation across next-generation foodservice and hospitality organizations.
Syllabus Content Requirements All Items Included

Innovations in Restaurant Tech & Design
HMG 6xxx | 3 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time: Monday 3:00 PM – 06:00 PM

INSTRUCTOR INFORMATION

Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Explore how AI, automation, and design innovation are reshaping modern restaurants. Students integrate data from POS, IoT, and CRM systems to engineer smart kitchens, immersive dining environments, and sustainable operations. Emphasis is placed on ROI modeling, workforce technology, and future-ready design strategies for intelligent, profitable restaurant ecosystems.

Course Prerequisite: None

Course Objectives & Student Learning Outcomes

Upon successful completion, students will:

1. Produce a comprehensive, board-ready 5-year tech/design roadmap with modeled ROI, risks, and milestones.
2. Deliver a live decision-intelligence dashboard (mock or real data) that drives a pricing/menu or labor decision.
3. Develop a robotics/IoT pilot charter including vendor matrix, safety SOPs, and success metrics (throughput, waste).
4. Author a traceability & food-safety protocol with blockchain/IoT data schema and recall drill outcomes.
5. Present a concept package (layouts, service flow, immersive CX) demonstrating ≥10% modeled lift in check or capacity.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Innovations in Restaurant Tech & Design* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-3-2

Suggested Books

- Lv, Z. & Fersman, E. (2025). Didgital Twins: Basics and Applications. Publisher: Springer. eText ISBN: 978-3-0311140-1-4

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

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Digital Twins¶

This section describes the collection of digital twin platforms available on HiPerGator. Digital twins are virtual representations of real-world objects, environments, and systems. The goal of a digital twin is to mirror the behavior and attributes of its real-world counterpart for the purposes of training, data realization, and iterative development. Research Computing provides access to essential infrastructures, tools, and programs to facilitate the creation and visualization of digital twins.

Access to Digital Twin Programs on HiPerGator¶

Digital twins are computationally demanding and generally require dedicated resources to provide the consistent availability that is necessary for their visualization and utilization. Our solution on

HiPerGator is OVX, a specialized cluster built for digital twin development and accessibility. While many programs and tools such as Unreal and Omniverse have limited compatibility with normal HiPerGator GPU resources, OVX provides low-latency access to a desktop environment that is specifically designed to handle demanding visualization and simulation efforts. Click here to learn more about OVX. Inquiries regarding OVX availability can be directed towards AI support or consulting.

Platforms for Digital Twins¶

- **Omniverse:** Omniverse is an encompassing title for a myriad of apps and tools primarily developed using the [Omniverse Kit SDK]. Omniverse apps have enabled many of the leading efforts in the field of digital twins as they provide easy access to a plethora of tools important for their creation, such as physically informed 3D environments, robust rendering and display pipelines, and a highly customizable extension system compatible with C++ and Python. For more information about Omniverse, visit Nvidia's site, or the official Omniverse documentation. Omniverse is currently supported on HiPerGator through OVX, and can most conveniently accessed through Nvidia's kit-app-template.
- **Isaac Sim:** Isaac Sim is a pre-built Omniverse application that is focused primarily on the development and simulation of robotics in physically-informed virtual environments. It allows for accessible prototyping of robotics that can be trained in realistic 3D environments and provides interfaces for simulated sensors, such as cameras, LiDAR, and contact sensors. It supports common robotics formats such as Onshape and URDF, and has APIs for communicating to ROS 2 for live connections. For more information and to download, visit Isaac Sim's official documentation. Isaac Sim is currently supported on HiPerGator through OVX.
- **Unreal Engine:** Unreal Engine is a world leader in the space of simulated 3D environments due to a consistently maintained set of powerful tools built for rendering, lighting, physical simulation, user interactivity, and so on. While not as customizable as other options, Unreal is promising as a singular solution for the construction of simulations and twins, and is backed by years of experience and strong community support. For more information about Unreal Engine or to download, visit the official Unreal Engine site. Unreal Engine is currently supported on HiPerGator through OVX.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

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

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Smart Restaurant Prototype and Decision Dashboard
Title: Designing a Data-Driven Concept for a Smart, Sustainable Restaurant
Purpose: The midterm project serves as a bridge between conceptual innovation and applied analytics. Students will design a *prototype restaurant concept* that integrates AI, IoT, automation, and design innovation to improve efficiency, sustainability, and customer experience. Students will produce both a concept plan and a decision-intelligence dashboard demonstrating how real-time data informs pricing, layout, or workforce optimization decisions.
Project Requirements:
Select a Concept Focus [Originality and feasibility of concept]
Choose one operational context (real or imagined):

- Full-service restaurant integrating AI and robotics
- Quick-service brand using predictive demand and IoT automation
- Fine-dining concept leveraging immersive tech and sustainability design
- Ghost kitchen network optimized through data analytics
- Hybrid "phygital" (physical + digital) experiential restaurant

Define:

- Concept name and mission
- Target market and location
- Strategic differentiation (tech, experience, sustainability)

Technology & Design Integration [Technical Execution]
Describe and visualize how your restaurant applies innovations such as:

- AI forecasting and menu engineering (pricing, upselling)
- IoT-enabled smart kitchen and HVAC systems
- Robotics in FOH/BOH operations
- AR/VR guest experiences or personalized digital environments
- Workforce tech (e.g., scheduling AI, VR training)

Include at least three technologies and justify their fit to your concept.
Decision Dashboard Design
Create a mock-up dashboard (Power BI, Tableau, Figma, Excel, or conceptual wireframe) that displays key restaurant metrics:

- Demand forecast, occupancy, or wait times
- Sales mix, check average, and menu profitability
- Energy usage or sustainability KPIs
- Labor productivity and uptime

Show how executives can use the dashboard to make real-time strategic decisions (e.g., "reduce prep line labor by 10% during low-demand hours").

ROI and Sustainability Analysis [Strategic Insight & Writing]
Prepare a basic ROI model estimating:

- Implementation cost of technologies
- Expected efficiency gains (time, energy, waste)
- Financial and environmental return (NPV, payback period, CO_2 reduction, etc.)

Include supporting assumptions and metrics.
Presentation (10 minutes): Summarize key findings and future scalability
Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Originality and feasibility of concept 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Technical Execution 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Strategic Insight & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound

foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Board-Ready Tech & Design Innovation Roadmap
Title: Building a Future-Ready Restaurant Ecosystem: A Five-Year Tech and Design Innovation Plan

Purpose: The final project culminates the course by requiring students to build a comprehensive innovation roadmap—a strategic, financial, and operational plan integrating emerging technologies, design principles, and sustainability initiatives. Students act as Chief Innovation Officers, presenting to a hypothetical board or investor panel.

Project Requirements:

Define the Enterprise Vision [Innovation & Feasibility]

Choose one of the following:

- Expand your *midterm concept* into a full-scale enterprise plan, or
- Develop a re-imagination of an existing brand (e.g., Marriott, Chipotle, Darden, Starbucks).

Define:

- Long-term brand mission
- Technology vision (AI, automation, sustainability)
- Customer and workforce experience goals

Tech Architecture and Design System [Technical Quality]

Develop a comprehensive tech-design architecture showing how systems connect:

- POS, IoT, and CRM data pipelines feeding into a unified analytics platform
- Automation workflows for kitchen, inventory, or delivery
- Immersive design innovations in FOH (AR menus, spatial acoustics, personalized lighting)
- Safety, uptime, and cybersecurity frameworks

Include a labeled architecture diagram showing data and process flow.

Financial Model and ROI Forecast [Business Strategy & ROI]

Build a five-year financial model capturing:

- Technology CAPEX and OPEX
- Efficiency gains (labor, energy, inventory)
- Customer experience lift (check average, retention)
- Sustainability ROI (waste reduction, emissions savings)

Present 3 scenarios—conservative, expected, and aggressive—with sensitivity analysis.

Workforce and Change Management Plan [Governance, workforce, and risk alignment]
Outline how the restaurant integrates humans and automation ethically:

- Role redefinition (AI monitors, robotics supervisors, digital concierges)
- Reskilling and training programs (VR or AR learning)
- Equity, inclusion, and data ethics safeguards

Provide measurable outcomes (e.g., 20% training time reduction, 95% employee tech adoption rate).
Sustainability and Food Safety Strategy
Design a traceable, sustainable ecosystem including:

- Blockchain/IoT for ingredient traceability
- Smart energy and water monitoring systems
- Food safety recall protocol and compliance matrix
- NPV and ESG impact analysis for sustainable tech investments

Five-Year Roadmap Visualization
Develop a visual roadmap (timeline or Gantt chart) showing:

- Annual milestones
- Key technology rollouts and upgrades
- Design refresh cycles and ROI checkpoints
- Sustainability and workforce milestones

Board-Ready Pitch
Create a 10-slide investor or executive deck highlighting:

- Problem, opportunity, and innovation thesis
- Architecture and operational model
- Financial forecast and risk mitigation
- Design impact and sustainability narrative
- Future expansion and competitive moat

Presentation (10 minutes): Record a 10-minute video pitch summarizing key insights, backed by visuals and metrics.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Examples

1. Case 1 – "Aurora Kitchen" A robotics-integrated fine-dining restaurant with adaptive lighting, smart acoustics, and predictive menu systems.
2. Case 2 – "BlueCarbon Café" A carbon-negative café chain powered by IoT analytics, zero-waste design, and energy recovery kitchens.
3. Case 3 – "OmniDine" A hybrid AI-managed restaurant network combining immersive AR dining rooms with ghost kitchen delivery arms.
4. Case 4 – "ChefCloud" A data-driven global F&B enterprise integrating smart equipment, personalization, and cloud-based analytics dashboards.

Final Project Rubric

	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Soundness of ML model and data use	Good Soundness of ML model and data use for improvement	Adequate Soundness of ML model and data use with noticeable gaps	Limited Soundness of ML model and data use, significant oversights	No evidence of Soundness of ML model and data use
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Governance, workforce, and risk alignment 15%	Comprehensive & depth of Governance, workforce, and risk alignment analysis	Good depth of Governance, workforce, and risk alignment analysis with some aspects for improvement	Adequate depth of Governance, workforce, and risk alignment analysis with noticeable gaps	Limited depth of Governance, workforce, and risk alignment analysis, significant oversights	No evidence of Governance, workforce, and risk alignment
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	The AI-Driven Transformation of Restaurants	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Big Data Analytics and Decision Intelligence in Restaurants	Chapter 2
Week 3	3	Artificial Intelligence Applications in Hospitality Management	Chapter 3 Due Monday: Discussion 1
Week 4	4	Robotics and Automation in Foodservice Operations	Chapter 4
Week 5	5	Smart Kitchens and the Internet of Things	Chapter 5 Due Monday: Discussion 2
Week 6	6	Digital Customer Experience and Front-of-House Tech	Chapter 6
Week 7	7	Personalization and AI-Driven Customer Engagement	Chapter 7 Due Monday: Midterm Project
Week 8	8	Innovative Restaurant Design and Immersive Dining Experiences	Chapter 8 Due Monday: Discussion 3
Week 9	9	Ghost Kitchens and Virtual Restaurant Brands	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Sustainable Technologies and Green Restaurant Design	Chapter 11 Due Monday: Discussion 4
Week 12	11	Supply Chain Management and Food Safety Technology	Chapter 12
Week 13	12	Culinary Innovation and Food Technology	Chapter 13 Due Monday: Discussion 5
Week 14	13	Workforce Management and Training Innovations	Chapter 14
Week 15	14	Future Outlook – Restaurants 2050 and Beyond	Due Friday: Final Project
Finals Week	15	Recorded Final Presentations Submitted	

Course|New for request 22075

Info

Request: HMG 6XXX Market & Consumer Research Practices in Hospitality (UF JAX campus)
Description of request: Course Description: Explore Generative AI's role in transforming hospitality market research. Students design LLM-based sentiment, persona, and forecasting models to unify B2C and B2B insights. Emphasis is placed on automation, ethical governance, and ROI-driven strategies that integrate NLP, recommendation systems, and competitive intelligence into adaptive, data-informed decision frameworks.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Market & Consumer Research Practices in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:25:14 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Market & Consumer Research Practices in Hospitality
Transcript Title Market & Consumer Research Pra
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Explore Generative AI's role in transforming hospitality market research. Students design LLM-based sentiment, persona, and forecasting models to unify B2C and B2B insights. Emphasis is placed on automation, ethical governance, and ROI-driven strategies that integrate NLP, recommendation systems, and competitive intelligence into adaptive, data-informed decision frameworks.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX Market & Consumer Research Practices in Hospitality as an Elective Course

The inclusion of HMG 6XXX: Market & Consumer Research Practices in Hospitality as an elective course for the Master of Science in AI-Driven Hospitality; and as a required course for both the Certificate in AI-Driven Customer Experience & Digital Marketing and the Certificate in AI-Powered Hospitality Analytics equips students with the advanced analytical and interpretive competencies needed to understand evolving consumer behaviors in an AI-enhanced marketplace. As personalization, predictive analytics, and sentiment modeling become central to modern hospitality strategy, leaders must be able to integrate robust market intelligence into evidence-based decision-making.

This course prepares students to:

Design and conduct research studies that blend traditional consumer insight methodologies with AI-enabled data analytics.

Interpret consumer trends using big data sources such as online reviews, loyalty program databases, and social media sentiment.

Translate data-derived insights into actionable marketing, pricing, and service design strategies that strengthen competitiveness and elevate guest satisfaction.

By mastering these skills, graduates are positioned to lead data-informed innovation in customer experience, brand strategy, and market development across the global hospitality industry.
Syllabus Content Requirements All Items Included

Market & Consumer Research Practices in Hospitality
HMG 6xxx | 2 Credits | Spring 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

Email: TBA@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Explore Generative AI's role in transforming hospitality market research. Students design LLM-based sentiment, persona, and forecasting models to unify B2C and B2B insights. Emphasis is placed on automation, ethical governance, and ROI-driven strategies that integrate NLP, recommendation systems, and competitive intelligence into adaptive, data-informed decision frameworks.

Course Prerequisite: None

Student Learning Outcomes (SLOs)
Upon completion, students will:

1. Produce a hospitality GenAI research plan unifying data sources, tools, and KPIs for B2C/B2B use cases.
2. Build a sentiment prototype (LLM + evaluation) with bias/quality evidence.
3. Evaluate a forecasting or recommender artifact and recommend improvements using causal tests.
4. Operationalize a survey-to-insight workflow and present an action plan for service recovery.
5. Author an ethics & compliance dossier (privacy, bias, explainability) and a 24-month roadmap to scale.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Generative AI in Hospitality Market Research* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-9-8

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term Project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Generative AI Sentiment & Persona Research Prototype
Title: "Designing a Generative AI System for Sentiment Extraction and Persona Development in Hospitality Markets"

Purpose: This project enables students to apply Large Language Models (LLMs) and NLP pipelines to real hospitality market data. Students will explore how AI can synthesize consumer sentiment and generate actionable personas for decision-making in hospitality marketing, branding, or operations.

Project Requirements:
Select a Hospitality Use Case [Clarity of problem framing and data collection]
Choose one market domain:

- Hotel brand reputation and guest satisfaction
- Restaurant or dining concept evaluation
- Travel platform user experience (Airbnb, Expedia, etc.)
- Cruise or event brand image tracking
- Loyalty program feedback and retention

Clearly define:

- The target audience (e.g., business travelers, luxury segment, Gen Z leisure market)
- Data sources (social media reviews, TripAdvisor, survey feedback, brand forums, etc.)

Sentiment & Intent Extraction [Application of AI tools (LLM/NLP)]

- Collect at least 200–300 text samples (real or simulated data) from public or anonymized feedback.
- Apply or simulate an LLM/NLP pipeline to extract:
    - Sentiment (positive/neutral/negative)
    - Key aspects (e.g., staff, cleanliness, pricing, service recovery)
    - Emotional tone (joy, anger, trust, frustration)

Explain which LLM or tool stack you would use (e.g., OpenAI API, Google Vertex AI, or Hugging Face).[Strategic Insight & Writing]
Using extracted insights, generate 3–4 data-driven personas representing customer clusters. Each persona must include:

- Name, demographics, values, digital behavior
- Motivations and pain points
- Preferred communication channels and loyalty drivers

Discuss how Generative AI assisted persona synthesis (e.g., prompting LLMs to describe personas based on input data).

Presentation (10 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Clarity of problem framing and data collection 25%	Clarity and accuracy of data ecosystem analysis Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Application of AI tools (LLM/NLP) 30%	Quality and functionality of predictive model/dashboard Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Strategic Insight & Writing 25%	Relevance to operational or business/service decisions High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Presentation 20%	Clarity, professionalism, and visual communication Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: AI-Driven Market Intelligence and Forecasting System

Title: "Building a Generative AI–Powered Market Research Framework for the Future of Hospitality"

Purpose: The final project synthesizes the full course journey—students will design a comprehensive GenAI-driven market research system integrating sentiment, persona, and forecasting components into one adaptive intelligence framework for a hospitality organization.

Project Requirements:

1. **Select a Sector and Business Challenge [Innovation & Feasibility]**

Choose one high-impact context:

- Hotel Group: Launching a new lifestyle brand
- Cruise Line: Predicting booking trends post-crisis
- Resort Chain: Optimizing marketing spend across digital channels
- Restaurant Group: Forecasting new menu adoption
- Destination Marketing Organization (DMO): Enhancing image and demand forecasting

Define your business goal—e.g., "Improve digital ad conversion by 20%," or "Forecast occupancy in emerging markets."

2. Design a Generative AI Market Research System [Technical Quality]

Your design should integrate three functional layers:

1. Data Input Layer:
    - Multi-source inputs: reviews, CRM, competitor ads, social media, surveys
    - Data pipelines (APIs, scraping, ETL systems)
    - Ethical data governance and anonymization
2. AI Intelligence Layer:
    - LLM-based modules for sentiment, persona, and summarization
    - Forecasting models (ML regression, Prophet, or LSTM) for demand prediction
    - Recommendation engine for pricing, bundling, or marketing optimization
3. Insight & Decision Layer:
    - Interactive dashboard showing real-time market trends
    - Scenario simulations (e.g., "What if we increase spend in Southeast Asia?")
    - Explainability layer: highlight AI reasoning and confidence scores

3. Evaluation and ROI Analysis [Business Strategy & ROI]

- Define Key Performance Indicators (KPIs)—e.g., forecast accuracy, customer satisfaction, revenue impact, or NPS improvement.
- Run or simulate at least two comparative scenarios (e.g., traditional vs. AI-assisted forecasting).
- Include an ROI table that outlines cost, benefit, and adoption timeline.

4. Ethical Governance and Compliance Dossier [Ethical & Workforce Insight]

- Develop a 3–5 page section covering:
    - Data privacy and consent protocols
    - Bias prevention and human oversight
    - Explainability standards for AI outputs
    - Risk mitigation plan for reputational harm

5. 24-Month Adoption Roadmap

- Phase 1: Pilot implementation at one site
- Phase 2: Model refinement and automation
- Phase 3: Multi-brand or cross-market rollout
- Phase 4: Continuous learning and retraining cycles

Include an organizational change plan addressing workforce upskilling, IT integration, and executive buy-in.

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Examples (for Final Project)

1. Case 1 – "Luxury Hotel Chain Demand Twin" Build a GenAI model that predicts demand shifts using OTA reviews, competitor ads, and macroeconomic data.
2. Case 2 – "Restaurant Group Menu Intelligence System" Integrate generative summarization and sentiment analytics to identify emerging flavor trends across markets.
3. Case 3 – "Cruise Line Voice-of-Customer Forecast Hub" Deploy LLMs to translate multilingual guest feedback into satisfaction scores and forecast route-level occupancy.
4. Case 4 – "Destination AI Research Hub" Build a generative market intelligence system integrating social media trends, traveler intents, and sustainability sentiment for destination branding.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Soundness of ML model and data use	Good Soundness of ML model and data use for improvement	Adequate Soundness of ML model and data use with noticeable gaps	Limited Soundness of ML model and data use, significant oversights	No evidence of Soundness of ML model and data use
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some	Adequate depth of ethical, privacy, and human impact analysis with	Limited depth of ethical, privacy, and human impact analysis,	No evidence of ethical & workforce insight

		aspects for improvement	noticeable gaps	significant oversights	
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be

addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

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Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Generative AI in Hospitality Market Research Generative AI Tools and Platforms for Hospitality Insights	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Customer Segmentation and Persona Development with AI	Chapters 2-3 Due Monday: Discussion 1

Week 3	3	Survey Design, Feedback Collection, and Automation with AI	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	Competitive Intelligence and Market Trend Analysis via AI	Chapters 6-7 Due Monday: Midterm Project
Week 5	5	Integrating AI into Hospitality Research Workflows	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Social Media: understanding and adjusting to changing algorithms	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Real time A/B ad distribution	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Authenticity in marketing (images, videos, audio) Accuracy in any ChatGPT generated copy	Chapter 14
Finals Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22081

Info

Request: HMG 6XXX Menu Engineering & Data Analytics (UF JAX campus)
Description of request: Course Description: Explore AI-driven menu engineering as a strategic and analytical discipline. Students design data ecosystems, predictive models, and visualization dashboards to optimize pricing, demand forecasting, and sustainability. Emphasis is placed on personalization, nutrition, and profitability through equipping future leaders to craft intelligent, globally competitive, and ethically informed menu strategies.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Menu Engineering & Data Analytics, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:05:10 PM
Form version: 4

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Menu Engineering & Data Analytics
Transcript Title Menu Engineering & Data Analyt
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description explore AI-driven menu engineering as a strategic and analytical discipline. Students design data ecosystems, predictive models, and visualization dashboards to optimize pricing, demand forecasting, and sustainability. Emphasis is placed on personalization, nutrition, and profitability through equipping future leaders to craft intelligent, globally competitive, and ethically informed menu strategies.

Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Menu Engineering & Data Analytics as an Elective Course

HMG 6XXX – Menu Engineering & Data Analytics, offered as an elective within the Master of Science in AI-Driven Hospitality and as a required course for the Certificate in Culinary Innovation & Advanced Technology, plays a vital role in preparing students for data-informed decision-making in modern foodservice environments. The course integrates AI-powered analytics, consumer behavior modeling, and profit optimization techniques into strategic menu design and pricing. As foodservice and restaurant operations become increasingly reliant on real-time data from inventory intelligence to

customer sentiment, students learn to interpret key performance indicators such as contribution margins, sales mix, and demand patterns through advanced predictive analytics.

By combining analytical rigor with creative strategy, HMG 6XXX – Menu Engineering & Data Analytics equips graduates to enhance profitability, personalize guest experiences, and elevate operational performance across restaurants, hotels, healthcare facilities, and global foodservice organizations. This course strengthens UF's leadership in shaping the next generation of AI-enhanced hospitality management.

Syllabus Content Requirements All Items Included

Menu Engineering & Data Analytics
HMG 6xxx | 3 Credits | Summer 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time:
Tuesday 12:50 pm -2:45 pm
Thursday 12:50 pm -1:40 pm

INSTRUCTOR INFORMATION

Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Explore AI-driven menu engineering as a strategic and analytical discipline. Students design data ecosystems, predictive models, and visualization dashboards to optimize pricing, demand forecasting, and sustainability. Emphasis is placed on personalization, nutrition, and profitability through equipping future leaders to craft intelligent, globally competitive, and ethically informed menu strategies.

Course Prerequisite: None

Course Objectives & Student Learning Outcomes

Upon completion, students will be able to:

1. **Integrate** AI-driven forecasting, visualization, and pricing tools into menu strategy.
2. **Analyze** regional/global menu case studies and **recommend** data-informed solutions.
3. **Construct** dashboards and cost models for profit contribution analysis.
4. **Defend** menu innovation and pricing strategies to executive stakeholders.
5. **Propose** a comprehensive, sustainability- and health-oriented global menu plan.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Menu Engineering & Data Analytics* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-4-9

Suggested Books

G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.

- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- **Introduction to Machine Learning (4e)** – Ethem Alpaydın ISBN 978-0262043793
- Probabilistic machine learning : advanced topics / Kevin P. Murphy. Cambridge, Massachusetts : The MIT Press, [2023] ISBN: 9780262048439

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Predictive Menu Analytics and Dashboard Design

Title: Designing an AI-Driven Menu Analytics Dashboard for Demand Forecasting and Profit Optimization

Purpose: This project allows students to apply data analytics, AI forecasting, and visualization techniques to optimize menu performance. Acting as data strategy consultants for a hospitality

brand, students will design a predictive analytics dashboard and data pipeline to inform real-time menu decisions on pricing, demand, and sustainability.

Project Requirements:

Select a Context [Analytical Depth]

Choose one hospitality operation or foodservice segment:

- Restaurant chain (casual, fine dining, or QSR)
- Hotel or resort F&B department
- Cruise line dining operations
- Institutional dining (corporate, campus, healthcare)

Define:

- Business challenge: e.g., menu inefficiency, food waste, poor sales mix, or pricing volatility.
- Operational scope: single outlet, regional, or global.

Develop a Data Ecosystem

Map how data is collected, integrated, and visualized:

- Data sources: POS transactions, IoT kitchen sensors, customer feedback, social media sentiment.
- Data pipeline: extraction, cleaning, and transformation.
- Analytics stack: Excel, Power BI, Tableau, or AI forecasting tools (Python, R, or simulation logic).

Create a data ecosystem flow diagram that shows how data moves from source → analytics → insight → decision.

Predictive Analytics and KPIs [Predictive analytics logic and KPIs]

Using simulated or real datasets, identify at least three predictive use cases, such as:

- Demand forecasting: Predict dish-level demand per day/week/season.
- Profitability modeling: Estimate item contribution margin and identify loss leaders.
- Waste reduction: Predict overproduction or spoilage using time series data.

Define and calculate 5–7 Key Performance Indicators (KPIs):

- Food cost %, menu item popularity index, waste %, profit per plate, labor-to-revenue ratio, etc.

Visualization Dashboard [Dashboard design and clarity & Writing]

Design an executive-style AI-powered menu dashboard that visualizes:

- Item-level performance and predictive insights.
- Color-coded signals (e.g., green = profitable; red = low-margin).
- Dynamic filters for menu category, time frame, and region.

If live tools are not possible, provide mock-ups or annotated screenshots showing expected layout, graphs, and key insights.

Ethics, Nutrition, and Sustainability

Include a 1–2 page reflection analyzing:

- How menu data collection respects guest privacy and transparency.
- How the model could promote sustainable, low-waste, or healthy offerings.
- Any ethical risks of over-personalization or algorithmic bias in menu recommendations.

Presentation (10 minutes): Summarize key findings and future scalability
Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Analytical Depth 25%	Exceptional Quality and depth of data ecosystem design	Good Quality and depth of data ecosystem design	Adequate Quality and depth of data ecosystem design	Limited Quality and depth of data ecosystem design	Poor Quality and depth of data ecosystem design
Predictive analytics logic and KPIs 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Dashboard design and clarity & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: AI-Driven Global Menu Strategy and Governance Plan
Title: Developing a Data-Driven Global Menu Engineering Strategy for a Multi-Unit Hospitality Brand

Purpose: The final project integrates analytics, forecasting, and leadership frameworks to produce a comprehensive AI menu engineering strategy. Students act as Chief Menu Innovation Officers, designing a global data governance, pricing, and sustainability roadmap—culminating in an investor- and executive-ready portfolio.

Project Requirements:

Select a Global or Regional Hospitality Brand [Innovation & Feasibility]

Choose a real or hypothetical company with multiple markets, such as:

- Marriott Bonvoy F&B division
- Starbucks, Hilton, or Accor's restaurant portfolio
- Global cruise line brand (Royal Caribbean, MSC, etc.)
- Sustainable dining group or virtual kitchen network

Define:

- Business objective: global consistency vs. local customization.
- Menu scope: breakfast, lunch, à la carte, or event menus.
- Target markets: select 2–3 regions to compare (e.g., U.S., EU, Asia-Pacific).

AI-Driven Menu Engineering Model [Technical Quality]

Design a menu engineering system that integrates:

- AI demand forecasting and dynamic pricing models.
- Machine learning-based menu mix optimization (profitability + popularity).
- IoT-integrated inventory management for waste and sustainability tracking.
- Generative AI for personalization (e.g., guest dietary preferences or cultural variations).

Visualize your AI-driven menu management system with a labeled flowchart (data → analytics → decisions → operations).

Operational and Financial Analytics [Business Strategy]

- Perform menu profitability analysis: identify stars, plow horses, puzzles, and dogs (traditional + AI-enhanced approach).
- Present a data-driven pricing model that adjusts to demand, region, and ingredient volatility.
- Estimate ROI or cost savings from implementing AI systems (labor reduction, waste decrease, improved sales mix).

Include a menu cost and revenue dashboard showing contribution margin, demand forecast, and sustainability score.

Sustainability, Nutrition, and Ethical Governance [Ethical & Workforce Insight]

Create a section outlining how the system ensures:

- Nutritional balance and transparency (AI for calorie, allergen, or sustainability scoring).
- Sustainable sourcing analytics (e.g., carbon impact per dish).
- Data privacy, fairness, and explainability in menu personalization algorithms.

Propose corporate governance measures such as:

- An *AI Ethics Committee for Menu Decisions*
- Standardized *Data Transparency Statements* for guests
- Employee training on AI literacy and ethical food marketing

Global Implementation Roadmap

Design a phased global rollout plan (24–36 months):

- Phase 1: Pilot AI analytics in one market (collect performance data).
- Phase 2: Scale system across multiple regions with cultural adaptation.
- Phase 3: Integrate AI dashboards enterprise-wide with KPI reporting.

Include a timeline visual with milestones, responsible teams, and performance indicators (e.g., profit %, waste reduction %, guest satisfaction).

Presentation (15 minutes) with slides and visual models [Presentation & Communication]

Report (15–20 pages, single-spaced, 12-point font, APA format).

Suggested Case Options for Final Project

1. Case 1 – "AI-Enhanced Global Menu Optimization for Hilton Hotels" Design a global menu intelligence system integrating forecasting, nutrition labeling, and waste tracking across multiple continents.
2. Case 2 – "Sustainable AI Menu for a Cruise Line" Develop a digital twin of onboard kitchens with predictive models for demand forecasting, ingredient optimization, and food waste reduction.
3. Case 3 – "Dynamic Menu Pricing for a Quick-Service Brand" Build an AI-based pricing and promotion dashboard adapting to real-time sales, weather, and regional events.
4. Case 4 – "Personalized Menu Experience for a Wellness Resort Chain" Integrate generative AI and customer segmentation to design data-driven, nutrition-optimized, personalized menu journeys.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Integration of AI, sustainability, and nutrition frameworks	Good Integration of AI, sustainability, and nutrition frameworks for improvement	Adequate Integration of AI, sustainability, and nutrition frameworks with noticeable gaps	Limited Integration of AI, sustainability, and nutrition frameworks significant oversights	No evidence of Integration of AI, sustainability, and nutrition frameworks
Business Strategy 20%	In-depth Quality of menu analytics, pricing, and visualization	Solid Quality of menu analytics, pricing, and visualization for improvement	Basic Quality of menu analytics, pricing, and visualization with notable gaps	Limited Quality of menu analytics, pricing, and visualization significant oversights	No evidence of Quality of menu analytics, pricing, and visualization
Ethical & Workforce Insight 15%	Comprehensive & depth of Governance, ethics, and global scalability	Good depth of Governance, ethics, and global scalability with some aspects for improvement	Adequate depth of Governance, ethics, and global scalability with noticeable gaps	Limited depth of Governance, ethics, and global scalability, significant oversights	No evidence of Governance, ethics, and global scalability
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

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E (0.00) = Below 60%

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- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

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ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Evolution of Menu Engineering: From Traditional to AI-Driven Approaches	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Data Ecosystems and Real-Time Feedback in Foodservice Operations	Chapter 2
Week 3	3	Artificial Intelligence and Machine Learning in Menu Planning and Pricing	Chapter 3 Due Monday: Discussion 1
Week 4	4	Predictive Analytics for Demand Forecasting and Inventory Optimization	Chapter 4
Week 5	5	Data Visualization and Performance Dashboards for Menu Analytics	Chapter 5 Due Monday: Discussion 2
Week 6	6	Customer Segmentation and Personalized Menu Marketing	Chapter 6
Week 7	7	Behavioral Psychology and Menu Design Strategy	Chapter 7 Due Monday: Midterm Project
Week 8	8	Sustainability and Environmental Impact in Menu Engineering	Chapter 8 Due Monday: Discussion 3
Week 9	9	Nutrition Science and Health-Driven Menu Optimization	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Operational Analytics and Real-Time Menu Management	Chapter 11 Due Monday: Discussion 4
Week 12	11	Profit Contribution Analysis and Cost Control	Chapter 12
Week 13	12	Revenue Management and Dynamic Pricing Strategies	Chapter 13 Due Monday: Discussion 5
Week 14	13	Global Menu Strategy and Brand Differentiation	Chapter 14
Week 15	14	Emerging Technologies and Future Trends in Menu Analytics	Due Friday: Final Project

Finals Week	15	Recorded Final Presentations Submitted	

Course|New for request 22072

Info

Request: HMG 6XXX Negotiation and Conflict Resolution in Hospitality (UF JAX Campus)
Description of request: Course Description: Examine negotiation and conflict resolution through the lens of AI innovation in hospitality. Students explore NLP, computer vision, and predictive analytics to design intelligent mediation and dispute-resolution systems. Emphasis is placed on ethics, cross-cultural dynamics, and AI–human collaboration to build emotionally intelligent, future-ready hospitality businesses.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Negotiation and Conflict Resolution in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:19:08 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Negotiation and Conflict Resolution in Hospitality
Transcript Title Negotiation and Conflict
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Examine negotiation and conflict resolution through the lens of AI innovation in hospitality. Students explore NLP, computer vision, and predictive analytics to design intelligent mediation and dispute-resolution systems. Emphasis is placed on ethics, cross-cultural dynamics, and AI–human collaboration to build emotionally intelligent, future-ready hospitality businesses.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Negotiation and Conflict Resolution in Hospitality

In an era defined by AI-driven operations, hospitality professionals must manage increasingly complex human–machine interactions, workforce transitions, and rapidly evolving service dynamics. Effective negotiation and conflict resolution skills are essential for leading teams, collaborating with vendors, and engaging stakeholders within data-intensive, technology-augmented environments. As an elective course in the Master of Science in AI-Driven Hospitality and a required course for the Certificate in Global Franchise Leadership & Innovation, HMG 6XXX – Negotiation and Conflict Resolution in Hospitality equips students to integrate emotional intelligence with data-informed communication strategies. Students learn to resolve disputes, negotiate strategic partnerships, and uphold ethical standards amid the organizational changes introduced by AI-enabled systems. Graduates will be

prepared to serve as forward-thinking leaders capable of evaluating, implementing, and guiding AI-based solutions across a broad range of service industries—from global hotel brands and franchise systems to healthcare hospitality and culinary enterprises.

Syllabus Content Requirements All Items Included

Negotiation and Conflict Resolution in Hospitality
HMG 6xxx | 2 Credits | Fall 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday & Thursday 4:05 pm – 6:00 pm

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Examine negotiation and conflict resolution through the lens of AI innovation in hospitality. Students explore NLP, computer vision, and predictive analytics to design intelligent mediation and dispute-resolution systems. Emphasis is placed on ethics, cross-cultural dynamics, and AI–human collaboration to build emotionally intelligent, future-ready hospitality businesses.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

Upon completing the course, students will be able to:

1. **Produce** an AI-enhanced negotiation framework tailored to hospitality operations.
2. **Defend** the integration of predictive analytics and conversational AI in real-world conflict resolution.
3. **Construct** AI-supported training modules for frontline hospitality staff.
4. **Evaluate** the ethical, legal, and cross-cultural impacts of AI systems in global hospitality disputes.
5. **Innovate** future-ready strategies for AI-mediated negotiation and conflict management in hospitality enterprises.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *AI in Advanced Negotiation and Conflict Resolution in Hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-5-6

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term Project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: AI-Mediated Negotiation Blueprint
Title: Designing an AI-Enhanced Negotiation Framework for a Hospitality Conflict Scenario
Purpose: The midterm challenges students to bridge traditional negotiation models with emerging AI applications. By applying NLP, sentiment analysis, and emotion recognition, students will prototype a conceptual AI negotiation system capable of addressing a real-world hospitality conflict.

Project Requirements:
[Clarity And Creativity of Proposed Framework] Scenario Selection: Choose one authentic or plausible hospitality conflict (e.g., overbooked luxury hotel, group booking cancellation, staff–guest cultural misunderstanding, or union–management wage dispute).

[Depth of Conflict Analysis] Conflict Analysis: Identify key stakeholders, emotional drivers, and negotiation interests. Apply at least one negotiation theory (e.g., principled negotiation, BATNA, game theory).

[Integration of AI Tools With Negotiation Models] AI Integration Concept:
- Use Natural Language Processing (NLP) to identify emotional tone and intent in conversations.
- Apply Machine Learning (ML) or Computer Vision (CV) concepts to model recognition of escalation signals (verbal or nonverbal).
- Outline an AI–human hybrid workflow for mediation or de-escalation.

Presentation (10 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Depth of Conflict Analysis 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Integration of AI Tools With Negotiation Models 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Clarity And Creativity of Proposed Framework 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post

five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Intelligent Conflict Resolution System Prototype
Title: Building the Future of Hospitality Mediation: An AI-Powered Negotiation Assistant

Purpose: This capstone project requires students to synthesize all course concepts to design (and partially simulate) a functional AI-driven negotiation and conflict-resolution system for the hospitality sector.

Project Requirements:

[Originality And Depth of AI System Design] Case Context: Select a hospitality organization type—e.g., international hotel brand, cruise line, convention center, or theme park. Identify a recurring or high-impact conflict type (guest-service, interdepartmental, or labor-related).

[Technical Quality] System Design:

- Develop a multi-layer AI system integrating:
  - Conversational AI (NLP) for real-time negotiation or complaint handling
  - Emotion recognition (CV or sentiment analytics) to assess stress or empathy
  - Predictive analytics (ML) to anticipate conflicts before escalation
- Include a visual system architecture diagram showing data flow, decision support modules, and human oversight nodes.

[Practicality and Strategic Foresight] Simulation Component:

Demonstrate a mock interaction (via scripted dialogue, chatbot demo, or annotated flow) showing how the system mediates a conflict scenario.

Strategic Roadmap:

- Outline an implementation and ROI plan, including staff training, data governance, and evaluation metrics for effectiveness.

[Ethical and Cross-Cultural Depth] Ethical & Cross-Cultural Audit:

- Assess privacy, transparency, and cross-cultural adaptation strategies.
- Include a brief policy framework for responsible AI mediation.

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Two Case Options for Final Project

1. Case 1 – "Luxury Resort Complaint Escalation": Design an AI–human mediation bot that resolves high-end guest disputes involving cultural misunderstandings and service recovery in multilingual contexts.

2. Case 2 – "Cruise Line Crew Mediation System": Build an AI-supported internal negotiation platform that anticipates labor conflicts, monitors sentiment across departments, and provides predictive alerts for HR and operations teams.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Originality And Depth of AI System Design 25%	Thorough Originality and practicality of AI solution	Originality and practicality of AI solution with minor omissions	Adequate Originality and practicality of AI solution with notable gaps	Limited Originality and practicality of AI solution significant omissions	Minimal or no Originality and practicality of AI solution
Technical Quality 25%	Exceptional Soundness of selected predictive analytics and data use	Good Soundness of selected predictive analytics and data use for improvement	Adequate Soundness of selected predictive analytics and data use with noticeable gaps	Limited Soundness of selected predictive analytics and data use, significant oversights	No evidence of Soundness of selected predictive analytics and data use
Practicality and Strategic Foresight 20%	In-depth Clarity of implementation roadmap	Solid Clarity of implementation roadmap for improvement	Basic Clarity of implementation roadmap with notable gaps	Limited Clarity of implementation roadmap significant oversights	No evidence of business strategy
Ethical and Cross-Cultural Depth 15%	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your “Display Name” in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University’s policies. For more information about UF’s policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor’s discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Negotiation and Conflict Resolution Fundamentals in Hospitality	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Natural Language Processing and Conversational AI in Conflict Resolution	Chapters 2-3 Due Monday: Discussion 1
Week 3	3	Computer Vision and Emotion Recognition in Service Encounters	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	AI-Powered Decision Support Systems for Negotiation Strategy	Chapters 6-7 Due Monday: Midterm Project
Week 5	5	AI-Mediated Negotiation and Virtual Agents AI for Training and Simulation in Conflict Resolution	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	AI Applications in Luxury Hotels and Integrated Resorts	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	AI in Cruise Lines – Managing Conflicts at Sea	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Ethical, Legal, and Cross-Cultural Considerations	Chapter 14
Finals Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22085

Info

Request: HMG 6XXX Professional Paper: Strategic Marketing & Brand Positioning (UF JAX Campus)
Description of request: Course Description: Evaluate how artificial intelligence transforms marketing and brand strategy in global hospitality. Students design predictive, data-driven campaigns, dynamic pricing models, and AI-powered CRM systems. Emphasis is placed on ethical AI use, ROI measurement, and future-forward strategies that elevate brand positioning, personalization, and competitiveness in evolving markets.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Professional Paper: Strategic Marketing & Brand Positioning, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:12:28 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Professional Paper: Strategic Marketing & Brand Positioning
Transcript Title Professional Paper: Strategic
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description evaluate how artificial intelligence transforms marketing and brand strategy in global hospitality. Students design predictive, data-driven campaigns, dynamic pricing models, and AI-powered CRM systems. Emphasis is placed on ethical AI use, ROI measurement, and future-forward strategies that elevate brand positioning, personalization, and competitiveness in evolving markets.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX Professional Paper: Strategic Marketing & Brand Positioning

The inclusion of HMG 6XXX Professional Paper: Strategic Marketing & Brand Positioning as an elective within the Master of Science in AI-Driven Hospitality provides students with a critical opportunity to synthesize their AI-focused learning into applied strategic outcomes. This course highlights how data analytics, consumer sentiment modeling, and predictive AI tools inform brand differentiation, competitive positioning, and market-driven innovation. Through the professional paper, students demonstrate advanced critical thinking and integrative application by translating machine learning insights into evidence-based marketing strategies and organizational decisions.

The course strengthens students' strategic, analytical, and ethical competencies in applying AI tools,

robotics, and data modeling across key managerial areas including decision-making, workforce analytics, revenue optimization, and customer experience design, ensuring graduates are equipped to lead data-informed marketing and branding initiatives in an AI-driven service economy.
Syllabus Content Requirements All Items Included

Professional Paper: Strategic Marketing & Brand Positioning
HMG 6xxx | 3 Credits | Summer 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 3
Meeting location and time: Friday 12:50 PM – 03:50 PM

INSTRUCTOR INFORMATION

TBA
Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:

Evaluate how artificial intelligence transforms marketing and brand strategy in global hospitality. Students design predictive, data-driven campaigns, dynamic pricing models, and AI-powered CRM systems. Emphasis is placed on ethical AI use, ROI measurement, and future-forward strategies that elevate brand positioning, personalization, and competitiveness in evolving markets.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

By successfully completing this course, students will be able to:

1. **Produce** an AI-driven strategic marketing plan for a hospitality brand with measurable KPIs.
2. **Defend** the integration of predictive analytics and dynamic pricing models in a hospitality context.
3. **Construct** a personalized loyalty and CRM framework enhanced by AI-driven insights.
4. **Evaluate and recommend** ethical, legal, and culturally adaptive AI practices for global hospitality brands.
5. **Innovate** future-focused AI applications for hospitality marketing that strengthen brand positioning and competitiveness.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *AI in Strategic Marketing and Brand Positioning in Hospitality* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-7-0

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.
- Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Businesses. 1st Edition (2023/2024). [ISBN 979-8-7657-8381-8. Textbook by KendallHunt] https://he.kendallhunt.com/product/artificial-intelligence-machine-learning-and-robot-applications-hospitality-businesses
- Artificial Intelligence, Machine Learning and Robotics in General Business. 1st Edition (2025). [ISBN ISBN 979-8-3851-85339-8. Textbook by KendallHunt]

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Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	30% (270 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	60% (540 pts)
Total		100% (900 pts)

Midterm Project: Applied Analysis Paper — "AI and Brand Intelligence in Hospitality Marketing"

Title: "Decoding the Brand: Evaluating AI's Impact on Market Positioning and Customer Engagement"

Objective: Students will investigate how artificial intelligence is transforming marketing strategy and brand positioning for a selected hospitality organization. The project emphasizes analysis, synthesis of data-driven insights, and critical evaluation of AI tools and models used for brand differentiation and personalization.

Brand and Market Selection

- Select a hospitality brand (hotel, resort, cruise line, or destination) operating in at least one international market.
- Provide a short overview: target segments, key competitors, and brand promise.

AI Integration Analysis

- Identify two to three AI technologies/theories currently or potentially used by the brand:
  - Examples: predictive analytics, dynamic pricing, sentiment analysis, recommendation systems, GenAI content creation, or voice/visual search.
- Analyze how these tools reshape customer segmentation, personalization, and engagement.

Brand Positioning Evaluation

- Assess how AI-driven marketing activities strengthen or weaken the brand's positioning.
- Compare with a competitor that uses AI differently.
- Incorporate sentiment analysis or online review data (using public datasets or simulated findings) to support your evaluation.

Ethics and Governance Brief

- Identify potential ethical or data privacy issues arising from AI use (e.g., bias, cultural misrepresentation, or over-automation).
- Propose guidelines for responsible brand communication through AI.

In-Class Presentation (10 minutes) summarizing insights and strategic implications.

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Brand and Market Selection 25%	Fully completes all required components with clear, relevant detail	Completes most components with generally clear detail	Completes core components with adequate detail	Completes only some components with limited detail	Provides minimal or incomplete components with unclear or missing detail
AI Integration Analysis 30%	Provides thorough, well-supported explanations analyzing all AI applications	Provides clear explanations analyzing most AI applications	Provides basic explanations analyzing some AI applications	Provides minimal or unclear explanations with limited analysis	Provides no meaningful explanations or analysis
Brand Positioning Evaluation 25%	Demonstrates high-quality critical evaluation with strong evidence, clear writing, and minimal errors	Demonstrates good evaluation with adequate evidence and minor writing issues	Demonstrates basic evaluation with noticeable writing or structural issues	Demonstrates limited evaluation with significant writing and clarity issues	Demonstrates poor evaluation, little evidence, and extensive writing errors
Presentation 20%	Delivers an exceptional, engaging presentation demonstrating strong insight and preparation	Delivers a clear and well-prepared presentation with good insight	Delivers an adequate presentation with some gaps in insight or preparation	Delivers a limited presentation with weak organization or insight	Delivers an incomplete or unprepared presentation
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Professional Paper — "AI-Driven Strategic Marketing & Brand Positioning Plan"

Title: "Reimagining the Brand: A Future-Ready AI Marketing Strategy for Global Hospitality"
Objective: This culminating professional paper requires students to design a comprehensive AI-driven marketing and brand positioning strategy for a hospitality enterprise. It demonstrates mastery in integrating analytics, personalization, dynamic pricing, ethics, and ROI measurement serving as a capstone deliverable aligned with industry-level consulting standards.

Brand Context and Market Research

- Select one hospitality organization (real or hypothetical).
- Conduct an environmental scan (PESTEL or SWOT) focused on AI readiness and digital maturity.
- Identify key consumer trends, competitive benchmarks, and emerging markets.

Strategic Framework Development

- Construct a comprehensive AI-driven marketing plan, integrating:
  - Predictive demand modeling and dynamic pricing
  - AI-powered personalization and CRM innovation
  - Brand storytelling through GenAI content systems
  - Sentiment analysis and reputation management tools
- Align each initiative with brand identity and customer experience goals.

ROI Measurement and KPI Dashboard

- Design a performance measurement framework:
  - Marketing KPIs: CLV, conversion rate, NPS, ROI per campaign, RevPAR lift.
  - Include sample dashboards or visualizations.

Future Trends Forecast

- Anticipate next-generation technologies — e.g., emotion AI, AR/VR immersion, AI-driven loyalty ecosystems — and their impact on hospitality marketing.

- Conclude with a 24-month implementation roadmap with budget tiers and milestones.

Ethical & Cultural Adaptation Strategy

- Address legal, ethical, and global marketing considerations:
  - Responsible AI use, bias mitigation, data privacy, and cultural intelligence.
- Include a formal Responsible-AI Charter for brand adoption.

Presentation (20 minutes): Summarize key findings and future scalability

Report (18–20 pages, single-spaced, 12-point font, APA format).

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Brand Context and Market Research 20%	Delivers a comprehensive, well-supported environmental scan; shows strong strategic insight into AI readiness, trends, and competitive landscape	Provides a clear environmental scan with minor gaps in depth or integration	Provides a basic scan with several missing elements or limited insight	Provides a partial or underdeveloped scan with weak support or unclear relevance	Provides little to no evidence of research, strategic insight, or understanding of brand context
Strategic Framework Development 20%	Presents a fully integrated, innovative AI-driven marketing strategy; all tools/models are well-justified and aligned with brand identity and CX goals	Provides a solid framework with generally strong alignment and justification, though some elements lack depth	Provides an adequate strategy with noticeable gaps in integration or alignment	Provides a limited or fragmented strategy with significant oversights	Provides no coherent strategic framework or AI integration
ROI Measurement and KPI Dashboard 20%	Designs a clear, data-driven measurement system with strong KPI logic, sample dashboards, and a compelling ROI model	Provides a functional measurement plan with good KPI alignment and minor weaknesses in clarity or detail	Provides a basic KPI framework with notable gaps in logic, clarity, or visualization	Provides limited or unclear KPIs with significant oversights; dashboards incomplete or missing	Provides no meaningful ROI framework, KPIs, or measurement structure

Future Trends Forecast & Roadmap Integration 15%	Demonstrates forward-thinking insight on emerging tech; produces a robust, feasible 24-month roadmap with clear milestones and budget tiers	Demonstrates good awareness of future tech; produces a logically structured roadmap with minor gaps	Demonstrates basic awareness of future trends; roadmap present but lacks detail or feasibility	Demonstrates minimal awareness of trends; roadmap incomplete, unrealistic, or poorly structured	Shows no understanding of future trends or implementation planning
Ethical & Cultural Adaptation Strategy **10%**	Provides a comprehensive, deeply informed analysis of legal, ethical, privacy, and cultural issues; Responsible-AI Charter is well-developed and actionable	Provides a strong analysis with some areas requiring more nuance; Responsible-AI Charter included with minor gaps	Provides a basic analysis with noticeable missing elements; Responsible-AI Charter lacks depth	Provides limited or superficial ethical discussion; Responsible-AI Charter weak or unclear	Provides no meaningful ethical analysis or cultural adaptation strategy
Presentation **15%**	Delivers an exceptional, well-structured presentation demonstrating professional-level communication, insight, and visual clarity	Delivers a strong presentation with good structure and clarity, minor areas for improvement	Delivers an adequate presentation with moderate issues in clarity, flow, or engagement	Delivers a limited or under-prepared presentation with significant issues	Delivers an incomplete, unclear, or unprepared presentation

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering

answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
• Be punctual with regards to course due dates.
• Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
• Be courteous and respectful to your peers and the instructor.

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ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	AI's Transformative Role in Hospitality Marketing	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	AI-Driven Customer Insights and Segmentation	Chapter 2
Week 3	3	Predictive Demand Modeling and Forecasting	Chapter 3 Due Monday: Discussion 1
Week 4	4	Dynamic Pricing and Revenue Optimization	Chapter 4
Week 5	5	Sentiment Analysis and Reputation Management	Chapter 5 Due Monday: Discussion 2
Week 6	6	Personalization Engines and Recommendation Systems	Chapter 6
Week 7	7	AI-Powered Loyalty Programs and CRM	Chapter 7 Due Monday: Discussion 3
Week 8	8	Voice and Visual Search in Hospitality Marketing	Chapter 8 Due Monday: Midterm Project
Week 9	9	Brand Storytelling and Content Creation with AI	Chapter 9
Week 10	10	AI-Driven Design Thinking and Service Innovation	Chapter 10 Due Monday: Discussion 4
Week 11	11	Ethical AI and Data Privacy in Hospitality Marketing	Chapter 11
Week 12	12	Measuring ROI and Performance of AI Initiatives	Chapter 12 Due Monday: Discussion 5
Week 13	13	Global Strategies and Case Studies in AI-Driven Hospitality Marketing	Chapter 13
Week 14	14	Future Trends and Emerging Technologies in AI-Driven Hospitality Marketing	Chapter 14
Week 15	15	Recorded Final Presentations Submitted	Due Friday: Final Project
Week	16	Recorded Final Presentations	

Course|New for request 22074

Info

Request: HMG 6XXX Simulation and Digital Twins in Hospitality Design and Operations (UF JAX campus)
Description of request: Course Description: Explore simulation and digital twin technologies as strategic tools for optimizing hospitality operations. Students design dynamic models integrating IoT and enterprise data to enhance efficiency, safety, and guest experience. Emphasis is placed on predictive maintenance, ESG optimization, workforce planning, and developing scalable, evidence-based roadmaps for digital transformation.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Simulation and Digital Twins in Hospitality Design and Operations, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:23:21 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Simulation and Digital Twins in Hospitality Design and Operations
Transcript Title Simulation and Digital Twins
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Explore simulation and digital twin technologies as strategic tools for optimizing hospitality operations. Students design dynamic models integrating IoT and enterprise data to enhance efficiency, safety, and guest experience. Emphasis is placed on predictive maintenance, ESG optimization, workforce planning, and developing scalable, evidence-based roadmaps for digital transformation.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Simulation and Digital Twins in Hospitality Design and Operations

The inclusion of HMG 6XXX Simulation and Digital Twins in Hospitality Design and Operations as an elective course within the Master of Science in AI-Driven Hospitality, and as a required course for both the Certificate in AI-Powered Hospitality Analytics and the Certificate in AI Applications in Healthcare Hospitality and Service Innovation, adds a critical applied dimension to the curriculum. Simulation modeling and digital twin technologies have become indispensable tools for predictive operations, sustainability optimization, and risk management across contemporary service environments.

By incorporating this course, students gain the capability to visualize, test, and refine hospitality operations from guest experience flows to building and facility management using data-driven digital replicas of real-world systems. The course directly supports several key program learning outcomes, including analytical decision-making, operational efficiency, and innovation leadership.

Students will learn how digital twin ecosystems enable real-time scenario testing, enhance design precision, and reduce operational costs and environmental impacts—competencies increasingly sought by leading hotel groups, event organizations, tourism enterprises, and healthcare hospitality systems worldwide.

Syllabus Content Requirements All Items Included

Simulation and Digital Twins in Hospitality Design and Operations
HMG 6xxx | 2 Credits | Fall 2027
Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

Email: TBA@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Explore simulation and digital twin technologies as strategic tools for optimizing hospitality operations. Students design dynamic models integrating IoT and enterprise data to enhance efficiency, safety, and guest experience. Emphasis is placed on predictive maintenance, ESG optimization, workforce planning, and developing scalable, evidence-based roadmaps for digital transformation.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

On completion, students will be able to:

1. **Produce** a deployable **digital twin blueprint** (scope, data sources, KPIs, governance) for a hotel/resort/cruise/theme park.
2. **Build and defend** a working **simulation prototype** that tests a critical decision (e.g., lobby redesign, ride throughput, embarkation).
3. **Evaluate** predictive-maintenance and safety scenarios and **recommend** action plans with ROI and risk tradeoffs.
4. **Engineer** a staffing optimization and **justify** its service/financial impact with modeled evidence.
5. **Publish** an executive-level implementation roadmap that **prioritizes** guest experience, ESG wins, and scale economics.

Selected Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Simulation and Digital Twins in Hospitality Design and Operations* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-6-7

Suggested Books

- Lv, Z. & Fersman, E. (2025). Didgital Twins: Basics and Applications. Publisher: Springer. eText ISBN: 978-3-0311140-1-4
- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Digital Twins¶

This section describes the collection of digital twin platforms available on HiPerGator. Digital twins are virtual representations of real-world objects, environments, and systems. The goal of a digital twin is to mirror the behavior and attributes of its real-world counterpart for the purposes of training, data realization, and iterative development. Research Computing provides access to essential infrastructures, tools, and programs to facilitate the creation and visualization of digital twins.

Access to Digital Twin Programs on HiPerGator¶

Digital twins are computationally demanding and generally require dedicated resources to provide the consistent availability that is necessary for their visualization and utilization. Our solution on HiPerGator is OVX, a specialized cluster built for digital twin development and accessibility. While many programs and tools such as Unreal and Omniverse have limited compatibility with normal HiPerGator GPU resources, OVX provides low-latency access to a desktop environment that is specifically designed to handle demanding visualization and simulation efforts. Click here to learn more about OVX. Inquiries regarding OVX availability can be directed towards AI support or consulting.

Platforms for Digital Twins¶

- **Omniverse:** Omniverse is an encompassing title for a myriad of apps and tools primarily developed using the [Omniverse Kit SDK]. Omniverse apps have enabled many of the leading efforts in the field of digital twins as they provide easy access to a plethora of tools important for their creation, such as physically informed 3D environments, robust rendering and display pipelines, and a highly customizable extension system compatible with C++ and Python. For more information about Omniverse, visit Nvidia's site, or the official Omniverse documentation. Omniverse is currently supported on HiPerGator through OVX, and can most conveniently accessed through Nvidia's kit-app-template.
- **Isaac Sim:** Isaac Sim is a pre-built Omniverse application that is focused primarily on the development and simulation of robotics in physically-informed virtual environments. It allows for accessible prototyping of robotics that can be trained in realistic 3D environments and provides interfaces for simulated sensors, such as cameras, LiDAR, and contact sensors. It supports common robotics formats such as Onshape and URDF, and has APIs for communicating to ROS 2 for live connections. For more information and to download, visit Isaac Sim's official documentation. Isaac Sim is currently supported on HiPerGator through OVX.
- **Unreal Engine:** Unreal Engine is a world leader in the space of simulated 3D environments due to a consistently maintained set of powerful tools built for rendering, lighting, physical simulation, user interactivity, and so on. While not as customizable as other options, Unreal is promising as a singular solution for the construction of simulations and twins, and is backed by years of experience and strong community support. For more information about Unreal Engine or to download, visit the official Unreal Engine site. Unreal Engine is currently supported on HiPerGator through OVX.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term Project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Simulation Prototype and Use-Case Justification

Title: **Designing a Simulation Prototype for Operational Optimization in Hospitality**

Purpose: This midterm project immerses students in the design and testing of an early-stage simulation to optimize a specific hospitality operation. It emphasizes data-driven reasoning, model logic, and storytelling—helping students connect simulation design with operational, environmental, and guest experience improvements.

Project Requirements:

[Realism and rigor of scenario selection] Select a Hospitality Context: Choose one of the following (or propose your own):

- Hotel front-desk and lobby flow
- Theme park ride capacity and queue management
- Cruise ship embarkation and safety drills
- Resort housekeeping scheduling
- Restaurant kitchen throughput

Define the Problem and Objective: Identify a process bottleneck, safety issue, or service inefficiency that could be improved through simulation. Quantify the goal—e.g., reducing wait time by 15%, improving energy use by 10%, or increasing staff utilization efficiency.

[Analytical depth and clarity of insights] Model Design:

- Choose an appropriate simulation methodology:
  - DES (Discrete Event Simulation) for queue/service flow
  - ABM (Agent-Based Modeling) for guest–staff interactions
  - SD (System Dynamics) for policy-level experimentation
- Map input variables, decision points, and key metrics (e.g., cost, time, energy, satisfaction).

[Correct use of simulation methodology] Data and Assumptions: Specify realistic data sources (IoT sensors, PMS data, POS systems, workforce logs) and state any assumptions transparently.

[Creativity in operational design and visualization] Scenario Testing: Run or describe at least two "what-if" scenarios—e.g., alternative floor layouts, staffing levels, or sustainability policies—and interpret results.

Presentation (10-15 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Realism and rigor of scenario selection (20%)	Scenario is highly realistic, contextually rich, and well-grounded in current industry or research practices. Demonstrates exceptional rigor, supported by data or credible evidence. Reflects a deep understanding of real-world complexities and variables.	Scenario is realistic and relevant, with solid contextual support. Demonstrates sound reasoning and moderate rigor. Minor gaps in evidence or depth, but overall credible and logical.	Scenario is somewhat realistic but lacks depth or contextual accuracy. Reasoning is generally sound but limited in scope or evidence. May overlook key factors influencing realism.	Scenario shows limited realism or weak connection to real-world conditions. Minimal supporting evidence or rationale; reasoning appears superficial.	Scenario is unrealistic, irrelevant, or lacks any evidence of rigor or logical reasoning. Does not demonstrate understanding of real-world context.
Analytical depth and clarity of insights (25%)	Demonstrates exceptional analytical depth with original, well-supported insights; arguments are logically structured, precise, and clearly articulated.	Shows strong analysis with clear reasoning and relevant evidence; insights are sound though may lack originality.	Provides basic analysis with some logical flow; insights are general or partially developed.	Limited analysis; ideas are underdeveloped or unclear, with weak or inconsistent reasoning.	Lacks analytical depth; insights are missing, irrelevant, or incoherent.
Correct use of simulation	Applies simulation methodology accurately and	Uses simulation correctly with minor conceptual or	Applies basic simulation steps but lacks depth or contains	Shows limited understanding of simulation methodology;	Fails to apply simulation methodology or

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
methodology (25%)	comprehensively; clearly defines variables, parameters, and assumptions; execution is precise and replicable.	technical errors; demonstrates good understanding of key steps and logic.	moderate inaccuracies in setup or interpretation.	major errors in process, assumptions, or analysis.	demonstrates no understanding of its principles.
Creativity in operational design and visualization (20%)	Demonstrates exceptional creativity with highly original concepts and visually compelling designs that elevate operational understanding and user engagement.	Shows strong creativity with clear, thoughtful, and well-organized visual designs that effectively communicate operational processes.	Displays basic creativity with understandable visuals; some originality present but lacks innovation or refinement.	Shows limited creativity; visuals are unclear, generic, or fail to enhance comprehension of the operational design.	Lacks creativity; design and visualization are missing, confusing, or unrelated to operational goals.
Presentation 10%	Clarity, professionalism, and visual communication Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Digital Twin Blueprint and Enterprise Roadmap
Title: Engineering a Digital Twin Ecosystem for Smart Hospitality Operations

Purpose: The capstone project challenges students to create a deployable digital twin blueprint for a hospitality operation, integrating IoT, analytics, and AI to optimize performance, ESG impact, and guest satisfaction. The project showcases their ability to think strategically about technology design, governance, and organizational rollout.

[Comprehensiveness of digital twin design] Industry Focus: Choose one sector:

- Hotel/Resort (guest experience, housekeeping, or energy optimization)
- Cruise Line (safety, maintenance, or logistics)
- Theme Park/Entertainment Venue (capacity planning or ESG optimization)

Digital Twin Design:

- Define the system's scope (physical assets, staff, and guests).
- Outline data sources and integrations (IoT, PMS, ERP, energy systems, workforce platforms).
- Illustrate the digital twin architecture, including real-time data flow and visualization layers.

[Technical Quality] Operational Simulation: Incorporate insights from your midterm simulation—now scaled to enterprise context. Include predictive analytics for:

- Maintenance optimization
- Workforce scheduling
- Guest personalization
- Sustainability tracking (ESG metrics)

[Ethical & Workforce Insight] Governance & Ethical Design:

- Identify privacy, security, and bias considerations in data collection.
- Draft an ethical use policy and KPI accountability matrix.

[Strategic and financial justification] Business & ESG Impact:

- Quantify the projected impact on cost, efficiency, energy, and guest satisfaction.
- Align with UN SDGs or corporate ESG frameworks.

Strategic Rollout Plan:

- Phase 1: Pilot (single property)
- Phase 2: Integration (multi-site data pipelines)
- Phase 3: Scale (corporate-level analytics and predictive systems)

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Options for Final Project

1. Case 1 – "Smart Resort Twin for Energy & Guest Flow Optimization" Develop a digital twin integrating IoT energy meters, HVAC data, and occupancy sensors to reduce carbon footprint while maintaining 5-star service quality.
2. Case 2 – "Cruise Line Predictive Maintenance Twin" Model a real-time vessel twin that tracks equipment data, forecasts maintenance needs, and integrates crew scheduling for safety optimization.
3. Case 3 – "Theme Park Twin for Capacity and ESG Optimization" Simulate ride capacity and crowd movement using agent-based modeling, integrating waste, energy, and mobility data to improve efficiency and sustainability.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Comprehensiveness of digital twin design (25%)	Demonstrates a fully developed digital twin design that integrates all key system components, real-time data flow, and functional interactivity. Clear alignment between virtual and physical systems with innovative analytical capabilities.	Includes most major system components and realistic data interactions. Design shows strong understanding of digital twin principles, though minor details or integrations are missing.	Presents a workable concept with basic structural elements. Limited depth in data connectivity or simulation detail.	Concept lacks integration or accuracy; digital twin design is incomplete or overly conceptual with minimal functional mapping.	Design is missing, unclear, or fails to demonstrate understanding of digital twin principles.
Technical Quality (25%)	Demonstrates exceptional technical accuracy, seamless integration of tools/AI systems, and innovative solutions with no detectable errors.	Strong technical performance with minor flaws; effectively applies appropriate tools and methods.	Meets basic technical requirements but lacks depth, consistency, or refinement.	Demonstrates limited technical understanding or inconsistent application; frequent errors.	Technical components are missing, incorrect, or non-functional.

Strategic and financial justification (20%)	Provides a compelling, data-driven justification clearly aligned with strategic priorities; demonstrates strong financial viability, return on investment, and sustainability.	Shows solid alignment with strategic goals and sound financial reasoning; minor gaps in data or long-term financial detail.	Demonstrates general alignment and adequate financial justification; lacks depth in analysis or supporting data.	Limited connection to strategic priorities or weak financial rationale; unclear or incomplete cost-benefit analysis.	No evident strategic alignment or financial justification; lacks analysis or feasibility.
Ethical & Workforce Insight (15%)	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight
Presentation & Communication (15%)	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

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D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.

• Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.

• Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources:
https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Simulation and Digital Twin Fundamentals for Hospitality	Chapter 1 Due Sunday: Syllabus Acknowledgement

Week 2	2	Technology Toolkit – Simulation Platforms and Digital Twin Tools	Chapters 2-3 Due Monday: Discussion 1
Week 3	3	Designing Smart Hospitality Spaces with Simulation	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	Enabled Digital Twins for Real-Time Operations	Chapters 6-7 Due Monday: Midterm Project
Week 5	5	Simulation-Driven Operational Strategy and Scenario Planning	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Enhancing Guest Experience and Service Delivery with Digital Twins	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Predictive Maintenance and Safety Management in Hospitality	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Sustainable Operations and Energy Efficiency via Digital Twins	Chapter 14
Finals Week		Recorded Final Presentations Submitted (Sector Spotlights)	Due Friday: Final Project

Course|New for request 22082

Info

Request: HMG 6XXX Smart Culinary Lab (UF Jax Campus)
Description of request: Course Description: Immerse students in the Smart Culinary Lab, where technology, design, and strategy converge. Learners develop AI-assisted menus, smart-kitchen architectures, and data-driven business models. Emphasis is placed on sustainability, financial modeling, and pilot execution, culminating in a board-ready venture pitch that showcases innovation, operational feasibility, and measurable ROI.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Smart Culinary Lab, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:07:16 PM
Form version: 4

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Smart Culinary Lab
Transcript Title Smart Culinary Lab
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3
Course Description Immerse students in the Smart Culinary Lab, where technology, design, and strategy converge. Learners develop AI-assisted menus, smart-kitchen architectures, and data-driven business models. Emphasis is placed on sustainability, financial modeling, and pilot execution, culminating in a board-ready venture pitch that showcases innovation, operational feasibility, and measurable ROI.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum HMG 6XXX Smart Culinary Lab is offered as an elective within the Master of Science in AI-Driven Hospitality and serves as a required course for Certificate: Culinary Innovation & Advanced Technology. The course highlights the critical intersection of AI, automation, and culinary innovation. Students engage with intelligent kitchen design, robotic food preparation, sensor-enabled operations, and data-informed menu optimization. Through hands-on experimentation with smart appliances, IoT-enabled inventory systems, and AI-assisted culinary creativity tools, the course emphasizes applied innovation that connects theoretical knowledge with real-world practice. This approach advances efficiency, sustainability, and personalized service within modern foodservice operations.

Graduates will emerge as innovative thinkers and strategic problem-solvers capable of evaluating,

implementing, and leading AI-driven solutions across a range of service sectors—from global hotel brands and healthcare facilities to next-generation culinary enterprises supported by the Smart Culinary Lab as an active testbed for experimentation and discovery.
Syllabus Content Requirements All Items Included

Smart Culinary Lab
HMG 6xxx | 3 Credits | Spring 2027
Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION
Credits: 3
Meeting location and time:

INSTRUCTOR INFORMATION
Instructor: TBA
Email: TBA@ufl.edu
Office hours: M, W (12:30 PM to 2:30 PM) & by appointment.

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

Course Description:
Immerse students in the **Smart Culinary Lab**, where technology, design, and strategy converge. Learners develop AI-assisted menus, smart-kitchen architectures, and data-driven business models. Emphasis is placed on sustainability, financial modeling, and pilot execution, culminating in a board-ready venture pitch that showcases innovation, operational feasibility, and measurable ROI.

Course Prerequisite: None

Course Objectives & Student Learning Outcomes (measurable)
Upon successful completion, students will:

1. **Produce** a board-quality capstone package (deck + memo + model) that **justifies** investment with quantified ROI and risk mitigations.
2. **Demonstrate** a working MVP/pilot protocol and **document** evidence of performance vs. KPI targets.
3. **Integrate** AI menu/CX logic with BOH automation and **present** an end-to-end data architecture.
4. **Formulate** a sustainability & ethical AI policy and **align** it to operations and brand standards.
5. **Present** a phased launch roadmap and **defend** trade-offs under executive Q&A.

Course Materials
Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Smart Culinary Lab* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940150-6-3

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

Participation in class is highly recommended and encouraged to facilitate ideas and concepts.

Technology Requirements: Students will use Microsoft Word, Excel and PowerPoint. Students may also use video producing and editing programs, although the preferred tool is for students to use a tool in which they are already comfortable. Students use the Anaconda distribution of Python on a Windows or Macintosh computer. All downloads and required software are free of charge. Although UF APPS includes the necessary tools, a local installation is strongly recommended. For any issues related to UF APPS or connectivity (including Wi-Fi), please contact the UF Help Desk at http://helpdesk.ufl.edu/ or call 352-392-4357. When you're looking to strengthen your analytical skills through Python, consider registering for this interactive introductory course: https://www.codecademy.com/learn/python. For a solid foundation in data analysis with Python, this Coursera course covers commonly used tools such as pandas and matplotlib: https://www.coursera.org/learn/python-data-analysis select "audit" to access the course for free.

Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

Students can earn 900 points (100%) in this class:

Assessment Tool		**% value (Pt value)**
Mid-term project	Report & presentation	40% (360 pts)
Discussions	5 discussions at 18 pts each	10% (90 pts)
Final project	Report & presentation	50% (450 pts)
Total		**100% (900 pts)**

Midterm Project: Smart Culinary Concept Blueprint
Title: Designing an AI-Driven Culinary Venture: From Concept to Smart-Kitchen Architecture
Purpose: This midterm challenges students to move from ideation to a strategic concept blueprint. Each student (or team) will design a *smart culinary venture* that merges AI-assisted menu design, smart-kitchen technologies, and a differentiated customer experience. By the end of this project,

students will produce a board-level concept document and system schematic ready for technical and financial validation in the final phase.

Project Requirements:

Select a Venture Theme [Originality and clarity of venture concept]

Choose one of the following directions (or propose your own):

- AI-Assisted Restaurant — predictive menus and dynamic pricing.
- Smart Ghost Kitchen — modular automation and data-driven menu rotation.
- Sustainable Culinary Hub — IoT-enabled energy and waste optimization.
- Personalized Dining Experience — AI-driven nutrition and emotion analytics.
- Hybrid F&B Retail Model — dine-in + delivery + vending robotics integration.

Clearly define:

- Target market (demographics, psychographics, region).
- Value proposition (why this concept now?).
- Guest experience promise (AI + hospitality synergy).

AI-Assisted Menu and Customer Experience Design [Technical integration of AI, smart-kitchen systems, & sustainability]

- Outline an AI-driven menu logic: personalization, seasonality, and sustainability criteria.
- Demonstrate menu data inputs: POS data, sentiment analysis, ingredient yield, or nutrition scores.
- Map how AI supports guest-facing experiences (chatbots, recommendation engines, dynamic displays).

Deliver a visual (e.g., flow diagram) showing the *data-to-decision pipeline*.

Smart Kitchen System Architecture

Design the back-of-house system showing integration between:

- POS, KDS, and ERP platforms
- IoT sensors (temperature, occupancy, inventory)
- Automation/robotics modules (cookline, plating, delivery)
- Safety & uptime protocols (fail-safe redundancies, human override, predictive maintenance).

Label how data flows between these components, and identify key *performance metrics* (throughput, downtime, waste).

Sustainability

Write a 1–2-page section covering:

- Environmental performance metrics (energy, water, food waste).
- Ethical AI guidelines (data privacy, workforce impact, fairness).
- Supplier traceability or carbon-tracking features.

Preliminary Financial Snapshot [Financial logic and preliminary ROI & Writing]

Include:

- Startup cost estimates (equipment, licenses, AI development).
- Revenue projections (year 1–3) based on throughput and pricing.
- ROI estimate and key assumptions (occupancy, labor savings, menu pricing).

Presentation (10 minutes): Summarize key findings and future scalability

Report (10–12 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Originality and clarity of venture concept 25%	Completed all steps required by the assignment	Completed almost all steps required by the assignment	Completed most steps required by the assignment	Completed some steps required by the assignment	Completed only a few steps required by the assignment
Technical integration of AI, smart-kitchen systems, & sustainability 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Financial logic and preliminary ROI & Writing 25%	High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and exceptional quality of work	Good effort and commendable quality of work	Adequate effort with room for improvement in quality	Limited effort with considerable improvement needed in quality	Minimal effort and significant improvement needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: Board-Ready Smart Culinary Venture Pitch
Title: Developing, Modeling, and Pitching a Smart Culinary Venture for Investment and Launch

Purpose: This capstone synthesizes all course learning. Students transform their midterm blueprint into a board-quality venture package including a validated pilot (MVP) concept, data-driven financials, and a launch roadmap. The final deliverable mirrors what would be presented to investors, C-suite executives, or innovation boards in hospitality technology ventures.

Project Requirements:

Refine and Expand the Venture Concept [Innovation & Feasibility]

Update your midterm concept using feedback and pilot data. Include:

- Updated problem statement and value proposition.
- Enhanced competitive benchmarking (global best practices).
- Defined KPI goals (efficiency, guest experience, sustainability, and profit).
-

Pilot (MVP) Design and Execution Plan [Technical Quality]

Design a pilot protocol to test your concept. Include:

- Pilot site description: scale, location, and key variables.
- Instrumentation: which systems will collect data (POS, IoT, guest surveys).
- Key metrics: throughput time, food waste %, revenue per labor hour, guest sentiment.
- Evaluation method: A/B testing, UX surveys, or operational dashboards.

If a real pilot is infeasible, provide a simulation or prototype design (mock dataset + expected results).

Financial and Operational Modeling [Business Strategy & ROI]

Build a robust 3-year financial model:

- Revenue streams (dine-in, delivery, retail, licensing).
- Expense categories (labor, COGS, tech amortization, utilities).
- Sensitivity analysis (best/base/worst cases).
- KPI dashboard: EBITDA margin, ROI, breakeven, sustainability ROI.

Deliver a P&L snapshot and ROI sensitivity chart.

Governance and Sustainability Plan [Ethical & Workforce Insight]
Develop a governance structure to ensure ethical and sustainable scaling:

- Data privacy and AI transparency policy.
- ESG performance targets (carbon, waste, inclusion).
- Oversight committees or roles (AI Ethics Lead, Sustainability Officer).

Include a section on responsible automation and workforce reskilling.
Global Rollout and Innovation Roadmap
Design a 36-month phased plan:

- Phase 1: Pilot & data validation
- Phase 2: Regional scaling
- Phase 3: Franchise/licensing or brand partnerships

Identify key risks (tech failures, cultural fit, regulatory hurdles) and mitigations. Forecast future innovation extensions (e.g., digital twin integration, robotics upgrades, or AI nutrition systems).
Board-Quality Investor Pitch
Prepare a 12–15 slide deck summarizing:

- Venture vision and pain point
- Product/tech ecosystem
- Business model & financial summary
- Pilot results and traction metrics
- Team, governance, and sustainability story
- Funding ask and ROI promise

Presentation (10 minutes): Summarize key findings and future scalability and simulating a board or investor pitch.
Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Concept Examples

1. Case 1 – "GreenBot Kitchen" A zero-waste, AI-assisted kitchen using robotics for portion control and predictive waste analytics.
2. Case 2 – "TasteSync" A smart cafeteria platform using generative AI to design daily menus personalized to employee health data.
3. Case 3 – "CloudChef Studio" A global ghost-kitchen ecosystem powered by AI forecasting, digital twins, and automated fulfillment.
4. Case 4 – "AI Sommelier" An intelligent beverage-pairing system using LLMs and sensor data to recommend wine or cocktails dynamically.

Final Project Rubric

	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Innovation & Feasibility 25%	Thorough Originality and practicality of SMART solution	Originality and practicality of SMART solution with minor omissions	Adequate Originality and practicality of SMART solution with notable gaps	Limited Originality and practicality of SMART solution significant omissions	Minimal or no Originality and practicality of SMART solution
Technical Quality 25%	Exceptional Pilot or robotics prototype and data validity	Good Pilot or robotics prototype and data validity for improvement	Adequate Pilot or robotics prototype and data validity with noticeable gaps	Limited Pilot or robotics prototype and data validity significant oversights	No evidence of Pilot or robotics prototype and data validity
Business Strategy & ROI 20%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Ethical & Workforce Insight 15%	Comprehensive & depth of ethical, privacy, and human impact analysis	Good depth of ethical, privacy, and human impact analysis with some aspects for improvement	Adequate depth of ethical, privacy, and human impact analysis with noticeable gaps	Limited depth of ethical, privacy, and human impact analysis, significant oversights	No evidence of ethical & workforce insight
Presentation & Communication 15%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your “Display Name” in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University’s policies. For more information about UF’s policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor’s discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Introduction to AI-Driven Culinary Innovation	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Concept Development and Ideation for Smart Kitchens	Chapter 2
Week 3	3	AI Menu Engineering and Product Development	Chapter 3 Due Monday: Discussion 1
Week 4	4	Smart Kitchen Systems and Automation	Chapter 4
Week 5	5	Digital Customer Experience and Personalization	Chapter 5 Due Monday: Discussion 2
Week 6	6	Market Positioning and Branding in Tech-Enabled Foodservice	Chapter 6
Week 7	7	Sustainability and Ethics in AI-Driven Hospitality	Chapter 7 Due Monday: Midterm Project
Week 8	8	Business Model Design and Revenue Strategies	Chapter 8 Due Monday: Discussion 3
Week 9	9	Financial Modeling and Operational Feasibility	Chapters 9-10
Week 10	SPRING BREAK- NO CLASS		
Week 11	10	Pilot Implementation and Prototyping	Chapter 11 Due Monday: Discussion 4
Week 12	11	Data Analytics and Iterative Improvement	Chapter 12
Week 13	12	Global Case Studies and Industry Benchmarks	Chapter 13 Due Monday: Discussion 5
Week 14	13	Strategic Pitch Design and Storytelling	Chapter 14
Week 15	14	Final Capstone Presentation and Launch Plan	Due Friday: Final Project
Week	15	Recorded Final Presentations Submitted	

Course|New for request 22077

Info

Request: HMG 6XXX Talent Management and Workforce Analytics in Hospitality (UF JAX campus)
Description of request: Course Description: Explore AI's transformative role in hospitality workforce management. Students design predictive and NLP-driven talent analytics, optimize scheduling and training, and build ethical, data-informed HR systems. Emphasis is placed on fairness, engagement, and ROI, preparing leaders to deploy scalable AI strategies that enhance productivity, retention, and employee experience.

The Department of Tourism, Hospitality and Event Management (THEM) in the College of Health and Human Performance (HHP) will launch a new Master of Science in AI-Driven Hospitality program at the University of Florida's Jacksonville campus. The proposed course, HMG 6XXX Talent Management and Workforce Analytics in Hospitality, is a newly developed offering that will fall under a new CIP code designation CIP — 52.0901 Hospitality Administration/Management, General.
Submitter: Rachel Fu racheljuichifu@ufl.edu
Created: 12/6/2025 9:29:44 PM
Form version: 3

Responses

Recommended Prefix HMG
Course Level 6

Course Number XXX
Lab Code None
Course Title Talent Management and Workforce Analytics in Hospitality
Transcript Title Talent Management and Workforc
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 4
Course Description Explore AI's transformative role in hospitality workforce management. Students design predictive and NLP-driven talent analytics, optimize scheduling and training, and build ethical, data-informed HR systems. Emphasis is placed on fairness, engagement, and ROI, preparing leaders to deploy scalable AI strategies that enhance productivity, retention, and employee experience.
Prerequisites none
Co-requisites none
Rationale for Placement in the Curriculum Rationale for Including HMG 6XXX – Talent Management and Workforce Analytics in Hospitality

The inclusion of HMG 6XXX Talent Management and Workforce Analytics in Hospitality as an elective course within the Master of Science in AI-Driven Hospitality; and as a required course for the Certificate in AI-Powered Hospitality Analytics, is essential to advancing the program's vision. As AI and automation reshape service roles, workforce structures, and performance systems, hospitality leaders must be equipped to apply data-driven insights to human capital decision-making.

This course prepares students to use predictive analytics, sentiment analysis, and workforce modeling to enhance recruitment, retention, scheduling, and employee engagement while upholding the human-centered service values that remain foundational to the industry. By integrating analytical rigor with

strategic leadership principles, students develop the capability to balance technological efficiency with workforce well-being, a leadership competency that is increasingly vital in AI-enhanced hospitality environments.

Syllabus Content Requirements All Items Included

Talent Management and Workforce Analytics in Hospitality
HMG 6xxx | 2 Credits | Summer 2027

Department of Tourism, Hospitality, and Event Management
College of Health and Human Performance, University of Florida

COURSE INFORMATION

Credits: 2
Meeting location and time:
TBA, Tuesday 4:05 pm - 6 pm
TBA, Thursday 4:05 pm - 6 pm

INSTRUCTOR INFORMATION

Dr. Rachel J.C. Fu
Office: 240D Florida Gym
Office Phone: 352-294-1694
Email: racheljuichifu@ufl.edu
Office hours: T, R (1:30 PM to 3:30 PM) & by appointment.

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

Course Description:

Explore AI's transformative role in hospitality workforce management. Students design predictive and NLP-driven talent analytics, optimize scheduling and training, and build ethical, data-informed HR systems. Emphasis is placed on fairness, engagement, and ROI, preparing leaders to deploy scalable AI strategies that enhance productivity, retention, and employee experience.

Course Prerequisite: None

Student Learning Outcomes (SLOs)

On successful completion, students will:

1. Produce a hospitality-specific AI talent strategy with phased pilots, KPIs, and risk controls.
2. Build and defend a prototype workforce model (e.g., attrition or staffing forecast) with explainability.
3. Evaluate an AI-enhanced hiring or L&D process and recommend fairness and compliance upgrades.
4. Operationalize an engagement/performance dashboard and formulate data-driven actions.
5. Author an executive roadmap for AI-ready culture, governance, and global scale-out.

Course Materials

Required Textbook: Course notebook/Textbook. (2026, forthcoming). *Talent Management and Workforce Analytics in Hospitality.* (1st ed.). The Eric Friedheim Tourism Institute & Kendall Hunt Publishing Company. ISBN: 979-8-9940149-2-9

Suggested Books

- G´eron, A. (2023). Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 3rd Edition. United States: O'Reilly media. ISBN: 9781098125967. https://www.oreilly.com/library/view/hands-on-machine-learning/9781098125967/
- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media, Inc. Available online at: https://jakevdp.github.io/PythonDataScienceHandbook/ This text is available for free online.
- VanderPlas, J. (2016). A Whirlwind Tour of Python. O'Reilly Media, Incorporated. Available online at: https://jakevdp.github.io/WhirlwindTourOfPython/ This text is available for free online.

Course Format: The course will include a combination of lectures, discussions, and projects. Attendance and active participation are essential to the nature of this course. This flexible, digitally enabled structure is designed to accommodate the needs of working professionals across the global (tourism, hospitality, and event management) industries, allowing them to advance their education and career credentials without geographic or scheduling constraints. To complement the virtual learning experience and foster high-impact engagement, the program will incorporate select *hybrid opportunities (38% in person; 62% online)*. These learning modules will be supported by on-campus events tailored to enhance applied learning, leadership development, and real-time problem solving within the industry.

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Course Evaluation: The following table provides a brief summary of the specific assessment tools for this course, as well as the related percentage (and point) value of the final grade.

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Discussions	5 discussions at 10 pts each	10% (90 pts)
Final Project	Report & presentation	50% (450 pts)
Total		100% (900 pts)

Midterm Project: Predictive Workforce Analytics Prototype

Title: Designing and Defending a Predictive Workforce Analytics Model for Hospitality Talent Optimization

Purpose: The midterm project immerses students in applied workforce analytics. Students will use data-driven reasoning to design, test, and defend a predictive model (e.g., attrition, staffing forecast, absenteeism, or satisfaction) within a hospitality context. The project emphasizes model logic, ethical reasoning, and real-world decision value.

Project Requirements:

Select a Hospitality Context [Analytical Depth]

Choose a real or simulated context such as:

- Hotel chain predicting front-line attrition
- Resort forecasting seasonal staffing needs
- Restaurant group identifying training bottlenecks
- Cruise line modeling absenteeism and engagement

Define:

- The problem statement (e.g., "Predict voluntary turnover in front-office roles")
- The stakeholders (HR team, GM, department heads)
- Desired outcomes (reduce attrition, improve scheduling accuracy, etc.)

Build or Design the Model [Technical Execution]

Use real, public, or synthetic data (Excel, Kaggle, or HR datasets). If no real model is built, students may simulate logic conceptually. Your model should include:

- Input variables: e.g., tenure, job type, satisfaction, schedule load, performance ratings
- Target variable: e.g., turnover, engagement score, or absenteeism
- Techniques: regression, decision trees, clustering, or ML classification (describe your choice)
- Evaluation metrics: accuracy, ROC-AUC, RMSE, etc.

AI Explainability & Ethical Assessment

- Describe how the model ensures fairness, transparency, and compliance.
- Identify potential biases (e.g., gender, nationality, tenure) and propose mitigation strategies.
- Include a brief fairness dashboard (e.g., comparing prediction rates by demographic).

KPI Alignment & Business Impact [Business relevance and KPI linkage & Writing]

Explain how the insights would:

- Improve key KPIs (retention rate, cost per hire, productivity index, etc.)
- Deliver measurable ROI or operational improvement.
- Support executive or managerial decision-making.

Presentation (10 minutes): Summarize key findings and future scalability

Report (8–10 pages, single-spaced, 12-point font, APA format).

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Analytical Depth 25%	Exceptional clarity and accuracy of analytical rigor and model design Completed all steps required by the assignment	Good quality of accuracy of analytical rigor and model design Completed almost all steps required by the assignment	Adequate quality of accuracy of analytical rigor and model design Completed most steps required by the assignment	Limited quality of accuracy of analytical rigor and model design Completed some steps required by the assignment	Poor quality of accuracy of analytical rigor and model design Completed only a few steps required by the assignment
Technical Execution 30%	Provided sufficient explanations justifying all answers	Provided explanations justifying most answers	Provided explanations justifying some answers	Provided explanations justifying a few answers	Did not provide explanations justifying any answers
Business relevance and KPI linkage & Writing 25%	Exceptional Business relevance and KPI linkage High-quality writing with proper use of sentences, paragraphs, and minimal grammar and spelling errors	Good quality of Business relevance and KPI linkage Good-quality writing with some minor issues in sentences, paragraphs, grammar, and spelling	Adequate quality of Business relevance and KPI linkage Adequate quality of writing with noticeable issues in sentences, paragraphs, grammar, and spelling	Limited quality of Business relevance and KPI linkage Limited quality of writing with significant issues in sentences, paragraphs, grammar, and spelling	Poor quality of Business relevance and KPI linkage Poor quality of writing, lacking proper sentences, paragraphs, and containing multiple grammar and spelling errors
Presentation 20%	Outstanding effort and	Good effort and commendable quality of work	Adequate effort with room for	Limited effort with considerable improvement	Minimal effort and significant improvement

Midterm Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
	exceptional quality of work		improvement in quality	needed in quality	needed in quality
Total= 100%					

Discussions: Discussions provide students an opportunity to expand their knowledge of course materials with other classmates. The discussions are meant for you to think like an event planner and expound foundational knowledge of event management to the discussion topics on Canvas. **Further instructions for initial posts and reply posts are found on Canvas.**

Yellowdig: Points for the Yellowdig assignment are accrued throughout the semester and derived from engagement in the Yellowdig community. Throughout the semester, the instructor will post five discussion prompts addressing current issues relevant to the course. Students are expected to contribute thoughtful, well-reasoned responses and engage with the perspectives of their peers by providing substantive comments on a classmate's post. Students are also encouraged to raise questions and foster dialogue within the group to deepen collective understanding and enhance professional learning.

Creating a new post: 11 points Reaching text length goal: 100 words
Commenting on another user's Post: 7 points Reaching text length goal: 80 words

Final Project: AI-Driven Talent Strategy & Governance Roadmap

Title: Architecting an AI Talent Management Strategy and Governance Framework for the Future of Hospitality HR

Purpose: The final project synthesizes the entire course, requiring students to design a comprehensive AI-driven talent management strategy for a hospitality enterprise. The project integrates predictive analytics, NLP, and recommender systems into a strategic blueprint that enhances employee experience, fairness, and organizational performance.

Project Requirements:

Select or Define the Organization [Comprehensiveness of AI talent strategy]

Choose one real or hypothetical entity:

- A global hotel chain (e.g., Marriott, Accor)
- A theme park or cruise line operator
- A restaurant management group
- A hospitality-tech startup offering workforce SaaS

Define the organizational challenge, such as:

- Improving global retention

- Automating scheduling and training
- Enhancing engagement through analytics
- Building an ethical AI governance culture

Design a Comprehensive AI Talent Management Ecosystem [Technical Quality]
Your framework should integrate at least four AI capability areas:

1. Predictive Analytics: Attrition, absenteeism, or workload forecasts
2. NLP Applications: Employee feedback, engagement sentiment, or chatbot HR support
3. Recommender Systems: Personalized learning or career mobility paths
4. Optimization & Scheduling Models: Workforce supply-demand balancing

Visualize how these components interact through data pipelines, analytics layers, and decision interfaces.
Governance and Ethics Framework
Compose a 3–5 page section detailing:

- Bias detection, fairness audits, and explainability tools
- Compliance with global labor and data privacy laws (GDPR, CCPA, etc.)
- HR governance structure (roles, accountability, oversight cadence)
- Human-in-the-loop intervention checkpoints

Employee Engagement and Experience Strategy [Business Strategy & ROI]
Integrate sentiment analysis and EX analytics:

- Identify key drivers of satisfaction and burnout
- Propose AI-assisted interventions (pulse surveys, feedback loops, predictive wellness)
- Align with KPIs such as engagement index, retention rate, and learning hours per FTE

ROI and Implementation Roadmap
Create a 24–36 month adoption plan with measurable milestones:

- Phase 1: Pilot analytics & training in one business unit
- Phase 2: Integrate predictive scheduling and NLP feedback systems
- Phase 3: Scale across regions with executive dashboards
- Include a financial summary with ROI projections and risk mitigation

Presentation: Record and submit a 10-minute presentation video summarizing insights, visuals, and system demonstration.

Report (10–12 pages, single-spaced, 12-point font, APA format).

Suggested Case Options for Final Project

1. Case 1 – "Global Resort Chain: Predictive Retention Dashboard" Build a talent analytics strategy reducing front-line turnover using predictive modeling, sentiment analysis, and AI scheduling.
2. Case 2 – "Cruise Line Workforce Digital Twin" Create a workforce simulation model forecasting staffing, wellness, and training across voyages, linked to an AI HR platform.
3. Case 3 – "Luxury Hotel Group: Fairness in AI Hiring" Design an AI-driven hiring and promotion process with fairness metrics and governance controls.

4. Case 4 – "Restaurant Franchise System: Workforce Productivity Twin" Engineer a digital twin that simulates staffing efficiency, engagement levels, and labor costs to guide management decisions.

Final Project Rubric					
	Rating (Points)				
Criteria and Weight	Excellent (100%)	Proficient (80%)	Satisfactory (60%)	Needs Improvement (40%)	Unsatisfactory (0%)
Comprehensiveness of AI talent strategy 30%	Thorough Comprehensiveness of AI talent strategy	Comprehensiveness of AI talent strategy with minor omissions	Adequate Comprehensive-ness of AI talent strategy with notable gaps	Limited Comprehen-siveness of AI talent strategy significant omissions	Minimal or no Comprehen-siveness of AI talent strategy
Technical Quality 25%	Exceptional Soundness of NLP, and optimization	Good Soundness of NLP, and optimization for improvement	Adequate Soundness of NLP, and optimization with noticeable gaps	Limited Soundness of NLP, and optimization, significant oversights	No evidence of Soundness of NLP, and optimization
Business Strategy & ROI 25%	In-depth Clarity of implementation roadmap and ROI model	Solid Clarity of implementation roadmap and ROI model for improvement	Basic Clarity of implementation roadmap and ROI model with notable gaps	Limited Clarity of implementation roadmap and ROI model significant oversights	No evidence of business strategy/ROI
Presentation & Communication 20%	Outstanding effort with exemplary analysis and presentation of findings	Good effort with commendable analysis and presentation	Adequate effort with some areas for improvement	Limited effort, with significant improvements needed	Minimal or no effort with substantial improvements needed

Grading Scale: The University's grading system will be used for this course. For information about UF's grades and grading policies, please consult https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx . In accordance, a student's overall performance in this course will be graded as follows:

A (4.0) = 94% & above; A- (3.67) = 90% to 93.99%;
B+ (3.33) = 87% to 89.99%; B (3.0) = 83% to 86.99%; B- (2.67) = 80% to 82.99%
C+ (2.33) = 77% to 79.99%; C (2.0) = 73% to 76.99%; C- (1.67) = 70% to 72.99%
D+ (1.33) = 67% to 69.99%; D (1.0) = 63% to 66.99%; D- (0.67) = 60% to 62.99%;
E (0.00) = Below 60%

Assignment Feedback and Response Time: All assignments are graded within seven days of the due date, unless otherwise communicated. Detailed feedback on most assignments is provided to each student and can be found in Canvas under the grade comments.

Class Policies: Students are expected to be professional in course discussions, which requires them to:

- Actively participate in the course at all times. Active participation includes asking thoughtful questions, contributing knowledge and ideas relevant to the topic, volunteering answers to questions, and sharing relevant material from other readings, classes, newspapers, and media sources.
- Be punctual with regards to course due dates.
- Be prepared to participate in discussions. Students are required to read all assigned materials prior to class.
- Be courteous and respectful to your peers and the instructor.

It is important to the learning environment that you feel welcome and safe in this class; and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. If your preferred name is not the name listed on the official UF roll, please let me know as soon as possible by e-mail or otherwise. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your UF-rostered name. I welcome you to the class and look forward to a rewarding learning adventure together.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Attendance & Late Assignment Policy: Late work is not allowed unless in alignment with the UF make-up policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with the University's policies. For more information about UF's policies, please consult (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.)

Students with prior knowledge of an excused absence must make arrangements to submit assignments prior to the due date. Documentation must be provided to the instructor for an excused absence. Excused absences include, but are not limited to, personal illness, family illness or death, jury duty, religious holiday, and official University activities. Absences will be excused at the instructor's discretion.

ACADEMIC POLICIES & RESOURCES

Academic Policies: A link to all updated academic policies and resources: https://go.ufl.edu/syllabuspolicies

COURSE SCHEDULE

The course schedule is tentative and subject to change. Changes will be announced on Canvas. It is the student's responsibility to keep track of announced schedule changes.

Week	Module	Topics	Assigned Readings/Assignment Due Dates
Week 1	1	Data and Machine Learning Foundations for Workforce Analytics Natural Language Processing and AI Communication in HR	Chapter 1 Due Sunday: Syllabus Acknowledgement
Week 2	2	Recommender Systems and Personalized Talent Development	Chapters 2-3 Due Monday: Discussion 1
Week 3	3	AI in Talent Acquisition and Recruitment AI in Workforce Planning and Scheduling	Chapters 4-5 Due Monday: Discussion 2
Week 4	4	AI in Training and Development Employee Engagement and Experience	Chapters 6-7 Due Monday: Midterm Project
Week 5	5	Performance Management and Productivity Optimization AI in Employee Retention and Turnover Management	Chapters 8-9 Due Monday: Discussion 3
Week 6	6	Ethical and Cultural Challenges of AI in Hospitality HR	Chapters 10-11 Due Monday: Discussion 4
Week 7	7	Global Perspectives and Sector Case Studies in AI Adoption Implementing AI Solutions in Hospitality Talent Management	Chapters 12-13 Due Monday: Discussion 5
Week 8	8	Leadership Strategies and the Future of AI-Driven Hospitality HR	Chapter 14
Week		Recorded Final Presentations Submitted	Due Friday: Final Project

Course|New for request 22235

Info

Request: IND 5XXX Inclusive Design in the Built Environment
Description of request: Request to create a new permanent graduate-level elective course, Inclusive Design in the Built Environment, as part of the Interior Design curriculum.
Submitter: Shabboo Valipoor sh.valipoor@ufl.edu
Created: 12/3/2025 8:44:44 AM
Form version: 1

Responses

Recommended Prefix IND
Course Level 5

Course Number XXX
Lab Code None
Course Title Inclusive Design in the Built Environment
Transcript Title Inclusive Design
Delivery Method PC - Primarily Classroom (0-49% of course content taught outside of classroom)
Effective Term Fall
Effective Year 2026
Rotating Topic No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 3 contact hours per week for a 3-credit course
Course Description Explores how human abilities and disabilities intersect with the built environment, emphasizing inclusive and human-centered design. Covers lived experiences of diverse user groups, environmental barriers and supports, and research methods that inform evidence-based strategies to enhance accessibility, autonomy, and quality of life.
Prerequisites N/A
Co-requisites N/A
Rationale for Placement in the Curriculum Inclusive Design in the Built Environment has been developed and offered since Fall 2021 (under IND5937 Special Topics) in response to growing interest in inclusive and universal design in the built environment, and it has consistently received positive student feedback. This graduate-level elective serves students in the College of Design, Construction and Planning (DCP), primarily those in the Master of Interior Design, though it attracts students from across DCP. The course examines environmental barriers and facilitators that shape the functioning and quality of life of individuals with diverse abilities and disabilities. Assigning a permanent course number will secure the course's place in the graduate curriculum and ensure students can continue to enroll without exceeding the Special Topics cap.
Syllabus Content Requirements All Items Included

IND5XXX: Inclusive Design in the Built Environment

Syllabus, Fall 20XX
3 Credit Hours

Class meeting Times: Wednesday | Periods 7-9 (1:55 p.m. - 4:55 p.m.)
Class meeting Location: ARCH 439

Instructor: Shabboo Valipoor
Email: sh.valipoor@ufl.edu
Office: ARCH 350 I Hours: Tuesday (8:50 a.m. - 12:50 p.m.), or by appointment
Phone: 352-294-1451

Course Description

This course explores how human abilities and disabilities intersect with the built environment, emphasizing inclusive and human-centered design. It covers lived experiences of diverse user groups, environmental barriers and supports, and research methods that inform evidence-based strategies to enhance accessibility, autonomy, and quality of life.

Objectives:

- Develop **awareness** of human variability in relation to the built environment.
- Identify and assess environmental **barriers** and **facilitators** that impact human functioning and quality of life.
- Understand and evaluate a range of **research methods** used to study different aspects of inclusive design in the built environment.
- Develop and effectively communicate **evidence-based design** proposals that apply principles of inclusive design.

Communications:

This course is taught mainly in a seminar format consisting of, but not limited to, lectures, presentations, assigned readings and video viewings, discussions, case studies, and writings.

Reading Materials:

No textbook is required for this course. Assigned readings (book chapters, journal articles, and similar materials) will be available through the UF online library and posted on Canvas. Additional open-access resources available online may also be assigned.

Materials and Supplies Fees:

There are no materials and supplies fees required for this course during this semester.

Instructional Methods:

The following modules are designed to support the course objectives:

Module 1: Vulnerable Populations & Environmental Needs
This module provides students with a comprehensive understanding of inclusive design and its application in the built environment. Students will explore current knowledge about individuals with various vulnerabilities and their environmental needs. Guest lecturers will supplement course lectures and student exercises. Reading assignments will guide students in exploring the relationship between the built environment and different vulnerable groups, including the aging population, individuals with chronic health conditions, those who do not fit traditional average measures, and those whose disabilities are compounded by social disadvantages.

Module 2: Literature Analysis & Research Tools
In this module, students will review the research methods and tools used to study vulnerable groups and how the physical environment may affect their health and quality of life. Students will read, evaluate, and present relevant research findings. Toward the end of this module, students will select their focus area and begin mapping the literature in that area.

Module 3: Evidence-Based Design
This module focuses on evidence-based design. Students will propose design interventions aimed at retrofitting an existing building to make it more accessible to a selected group of occupants with special needs. Each student will choose a focus area, explore user needs, study research findings to inform their design, and propose evidence-based design solutions. The final product of this module will be a poster presentation showcasing the process and outcomes.

UF ACADEMIC POLICIES & RESOURCES:

For academic policies and resources, visit https://go.ufl.edu/syllabuspolicies
The link includes details on:

- Requirements for attendance and makeup assignments
- Getting connected to the Disability Resource Center (DRC)
- UF Grading policies
- Course Evaluations
- Honesty Policy regarding cheating, plagiarism, etc.
- Campus Health and Wellness Resources
- In-Class Recording
- Academic resources (i.e., Computing Help Desk, Career Connections, Library Support, Writing Studio, etc.)

Grading Policies

Methods by which grades will be determined

The final grade will be based on your performance in the following activities:

Participation (10%)
Participation reflects consistent attendance, engagement in class discussions and activities, and completion

of assigned peer reviews. Engagement is assessed through class discussions and activities that are graded for completeness (50%) and thoughtful/appropriate contributions (50%).

Assignments / Presentations (35%)
Assignments and presentations are designed to demonstrate students' understanding of course concepts and their ability to apply them to design or research contexts. Each task's specific requirements, deliverables, and evaluation criteria are provided on Canvas.

Reflection Essay (15%)
The reflection essay invites students to critically connect their learning experiences to broader course themes. Expectations and grading criteria are outlined on Canvas.

Final Project & Progress Reviews (40%)
The final project is designed to assess students' ability to apply knowledge gained throughout the course in a small-scale, evidence-based design project. Progress reviews evaluate the development and refinement of ideas throughout the semester. Guidelines, deliverables, and grading rubrics are provided on Canvas.

Grading Scale:

For further information on UF's Grading Policy, see: http://www.isis.ufl.edu/minusgrades.html

Grade	%	Grade points	Grade	%	Grade points
A	93-100	4.0	C	73-76.9	2.0
A-	90-92.9	3.67	C-	70-72.9	1.67
B+	87-89.9	3.33	D+	67-69.9	1.33
B	83-86.9	3.0	D	63-66.9	1.0
B-	80-82.9	2.67	D-	60-62.9	.67
C+	77-79.9	2.33	E	0-59	0.0

A Weekly Schedule of Topics and Assignments:

For a detailed schedule of assignments and class activities, see the course schedule on Canvas. Disclaimer: This schedule represents the current plans and objectives. As we go through the semester, those plans may need to change to enhance the learning experience in class.

Course Policies

Attendance & Participation:

Regular and punctual attendance is essential to your success in this course. If you must miss a class due to illness, emergency, or religious holiday, notify the instructor as soon as possible. Documentation may be required. Students may have **one unexcused absence** without consequence. Each additional unexcused absence will result in a **10% deduction** from the **participation grade**. Two consecutive unexcused absences will result in a deduction of **one letter grade** from the final **course grade** due to a significant disruption in learning and class progress. Excessive absences will prevent you from meeting course objectives and will affect your standing in the class. After due warning, you may be prohibited from further attendance and subsequently assigned a failing grade. Requirements for class attendance and assignments are consistent with university policies:
https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Make-up & Assignment Policy:

Assignments must be submitted through Canvas on the designated assignment page, following all posted instructions. Due dates are listed on the Canvas calendar. All assignments (whether complete or incomplete) must be submitted by the posted deadline and will be graded as submitted. Exceptions will be made only for excused absences, in which case a reasonable amount of time will be provided to make up the work. **Late work in unexcused situations will be penalized one full letter grade for each day (or partial day) past the deadline**.

Schedule, Fall 20XX

WK	Date	Module	Lectures / Class Activities	Assignment Due
1	8/26	(1) Vulnerable Populations & Environmental Needs	- Introduction to course and semester plans - Lecture (Inclusive Design: History, Principles, Challenges)	
2	9/2		- Lecture (Disability and the Built Environment) - Observation presentations & discussions	Critical observation
3	9/9		- Lecture (Aging and the Built Environment) - Class presentations & discussions	Readings (Environments for People with Dementia)
4	9/16		- Guest lecture 1 (Design for Sight by E. Schambureck) - Lecture (Human-Centered & Person-Centered Design)	Readings (Design for Autism)
5	9/23		- Guest lecture 2 (Case studies by GBBN designers) - Class presentations & discussions	Case study
6	9/30	(2) Literature Analysis & Research Tools	- Lecture (Review of Research Methods) - Guest lecture 3 (Evidence-based design by HGA team)	
7	10/7		**Site visit - Jacksonville**	Reflection essay
8	10/14		Assigned paper presentations, peer reviews, and discussions	Assigned papers reading & presentation
9	10/21		Selected paper presentations, peer reviews, and discussions	Selected papers reading & presentation
10	10/28	(3) Evidence-Based Design	Lecture (Literature mapping & evidence-based design)	Selected topic & annotated bibliography
11	11/4		Progress review Q&A session with LISC Jacksonville	Literature review
12	11/11		**Veterans Day**	
13	11/18		Progress review & mock poster presentations	Project progress
14	11/25		**Thanksgiving Break**	
15	12/2		Final poster presentation	Canvas submission due at midnight

* This calendar is a general outline of the course. The instructor reserves the right to alter the course in response to academic conditions and opportunities.

Course|New for request 21675

Info

Request: VME 6XXX Grantsmanship Course
Description of request: Request to create a new graduate course that will be offered in the summers by Dr. Rhoel Dinglasan. We wish for the course to be effective for the summer of 2026.
Submitter: Aritza Fargas Osorio fargasosorioa@ufl.edu
Created: 12/4/2025 11:46:36 AM
Form version: 2

Responses

Recommended Prefix VME
Course Level 6

Course Number XXX
Lab Code None
Course Title Grantsmanship Course
Transcript Title Grantsmanship Course
Delivery Method HB - Hybrid Blend (50-79% of course content taught outside of classroom)
Effective Term Summer
Effective Year 2026
Rotating Topic No
Repeatable Credit? No

Amount of Credit 4

S/U Only? No
Contact Type Regularly Scheduled
Course Type Lecture
Weekly Contact Hours 6 contact hours per week x 13 weeks = 52 contact hours for a 4 credit course.
Course Description This is an intensive grants writing course (4 credits) designed to produce at the end of the Summer C Session,80% of the components for a complete F31/32 grant (PA-2372/) application for submission during the NIHNRSA December cycle. Students must participate in the discussion in a meaningful way in every class. The course includes group/class discussions and one-on-one meetings with the instructor to get individualized guidance to complete the grant application sections.
Prerequisites Must be a doctoral student with an identified thesis research project topic and plan.

Rationale for Placement in the Curriculum Degree level: Graduate
Syllabus Content Requirements All Items Included

VME6### Grantsmanship Course

SEMESTER: SUMMER C 2026
CREDIT HOURS: 4
GRADING SYSTEM: LETTER GRADE

Course Coordinator

Name: Rhoel R. Dinglasan PHD MPH
Phone: 352-294-8448
Email: rdinglasan@epi.ufl.edu
Office Hours: Mondays 3-5 pm or by email appointment.

Course Description

- This is an intensive, 13-week grant writing course (4 credits) designed to produce, at the end of the Summer C Session, 80% of the components for a complete F31/32 grant (PA-2372/) application for submission during the NIH NRSA December cycle. Students must participate in the discussion in a meaningful way in every class. The course includes 1 hr group/class discussions and 2 hr one-on-one meetings with the instructor to receive individualized guidance to complete the grant application sections. Several iterations of each section are expected to be completed satisfactorily before a student can progress to the next module.

- There will be a mock study section, wherein students participate in peer review of applications using the NIH guidelines for review and scoring criteria. Faculty from UF and outside UF will be invited to review a student's application and provide expert critiques. The students sit through a live study section discussion by outside faculty to get an inside look at the process. The review process has been established with three major outcomes:

    1. Professional development: This course is set to provide students with critical career skills of building all aspects of an effective proposal, which will serve as a foundation for the development of grant applications.
    2. Professional experience: It is expected that eligible students who take this class will submit an application on December 8 (submission to the Division of Sponsored Programs will be 5 business days before the due date). Dr. Dinglasan will shepherd you through this process personally. The link below contains the current instructions: https://grants.nih.gov/grants/guide/pa-files/PA-23-272.html
    3. Academic Advancement: Students take advantage of this intense course to prepare a rigorous research plan as part of the requirements for their written qualifying exam.

- All students who take this class are required to donate their submitted F31 application to the course director with the understanding that it may be used in future versions of the course.

- The course is limited to 6 students. The number of credit hours (4) is a result of the request of students from the first few years of this course to provide credit hours that directly reflect the amount of instruction by the instructor and the level of effort by the student. The class is broadly suitable for graduate students in CVM, UF/IFAS, CALS/CLAS, COM, and CPHHP, as well as those students who are interdisciplinary, e.g., biomedical engineering and biological sciences.

Course Pre-Requisites / Co-Requisites

Must be a doctoral student who has selected a laboratory, identified a thesis research project topic, assembled a thesis and research plan. While the course is advantageous for students who plan on qualifying in the Fall term, the course is also suitable for students who have recently qualified.

Student Learning Outcomes (SLO)

After successful completion of this course, students will have:

1. In-depth knowledge of strategic writing and critical elements for any grant application
2. Developed skills in the art of selling themselves
3. Developed critical thinking skills to frame a research question and a compelling "hook"
4. Augmented skills in concise, complete, and persuasive writing
5. Gained additional skills in time management, organization, figure generation, and presentation of rigorous data
6. Gained deeper insight and knowledge of the process of grant review and participation in the peer review process
7. Completed a peer-reviewed F30/31 grant application (80% complete) that can be easily completed with the help of the student's primary mentor (sections completed by the mentor/advisor) for submission.

Course Schedule

The course follows the Summer C schedule from May 11 to August 7, 2026.

Class meetings will be held over ZOOM - Meeting ID: 934 9852 7884. All classes (lectures) will be on Mondays from 1250-245 pm (Periods 6-7), and all one-on-one meetings will be 2 hrs based on student availability for flexibility. The final class will be from 1-4 pm between August 3-6, as this depends on the availability of the external faculty reviewers.

This weekly schedule contains topics, assignments, and due dates. Please refer to Canvas for updates and announcements of any changes to this schedule. Instructional hours are provided at a per student basis below.

Week	***Date***	***Topic***	***Location***	**SLO # Above**	***Contact Hours***
1	May 11	Introduction and components of the Fellowship/Career Grant applications – NIH Biosketch template is sent out with the welcome email prior to the start of classes to enable the students to start	Online (class)	1,2	2.0

Week	*Date*	*Topic*	*Location*	**SLO # Above**	*Contact Hours*
		preparing their drafts. Sign up for O3 meetings (2 hr time slots) with the instructor for week 2.			
2	May 18	NIH Biosketch (Fellowships format) is due. Work on refining the biosketch using instructor comments that are returned to you on May 20. Meet with the instructor during your 2 hr time slot to go over the biosketch during the week. Sign up for O3 meetings (2 hr time slots) with the instructor for week 3.	Online (class and one-on-one, O3)	1,2	4.0
3	May 25	NIH Biosketch version 2 is due @2 PM. Meet with the instructor during your 2 hr time slot to go over the biosketch during the week.	Online (class and one-on-one, O3)	1,2	4.0
4	June 1	How to prepare the Specific Aims Page. Sign up for O3 meetings (2 hr time slots) with the instructor.	Online (class and O3)	1,3	4.0
5	June 8	Specific Aims page (draft 1) is due. Class discussion. Complete the Specific Aims page (draft 2). During this period, begin a rough draft of your Research Plan (draft 1) based on your Specific Aims page comments using the provided template. Meet with the instructor during your 2 hr time slot during the week.	Online (class and O3)	1,3	4.0
6	June15	Discussion of draft 2 of your Specific Aims page and the Research Plan. Submit a copy to the instructor after class. Introduction of the Support Documents. Prepare drafts of the Support Documents. Sign up for O3 meetings (2 hr time slots) with the instructor.	Online (class and O3)	1,3,4,5	4.0
7	June 22	Discussion of the Support Documents. Continue to refine your Research Plan (draft 2) and make edits to your support documents. Meet with the instructor during your 2 hr time slot during the week.	Online (class and O3)	1,3,4,5	4.0
8	June 29	Research Plan (draft 2) is due. General discussion. Meet with the instructor during your 2 hr time slot during the week. Sign up for O3 meetings (2 hr time slots) with the instructor for week 9.	Online (class and O3)	1,3,4,5	4.0

Week	*Date*	*Topic*	*Location*	**SLO # Above**	*Contact Hours*
9	July 6	General discussion of the Research Plan. Meet with the instructor during your 2 hr time slot to discuss the Research Plan and Support Documents. Meet with the instructor during your 2 hr time slot during the week. Sign up for O3 meetings (2 hr time slots) with the instructor.	Online (class and O3)	1,3,4,5	4.0
10	July 13	Support Documents (draft 2) and any revised versions of the Biosketch, Specific Aims, and/or Research Plan are due @ 2 PM. Meet with the instructor during your 2 hr time slot during the week. Sign up for O3 meetings (2 hr time slots) with the instructor for week 11.	Online (class and O3)	1,3,4,5,6	4.0
11	July 20	Final Q&A opportunity before submitting the complete grant application (minus budget/justification). Final version of all grant components is due @ 5 PM. Meet with the instructor during your 2 hr time slot. Sign up for O3 meetings (2 hr time slots) with the instructor for week 12. Grant review assignments go out to faculty reviewers and course participants.	Online (class and O3)	1,3,4,5,6	4.0
12	July 27	Discuss the review process for each other's fellowship or grant applications. Prepare comments on each assigned application you review using the NIH Fellowship Critique Score sheet. Meet with the instructor during your 2 hr time slot during the week. Submit preliminary score and a copy of your score sheet to the instructor by August 2, 2026. Sign up for O3 meetings (2 hr time slots) with the instructor for week 13.	Online (class)	6,7	4.0
13	August 3-6	Mock NIH Study Section of applications by the class and invited faculty reviewers. The session will be recorded for students. Post-study section discussion with the class. Meet with instructor to go over comments from the study section.	Online (class)	6,7	6.0
			Total		52

Required Textbooks and/or Course Materials

There are no required textbooks and/or course materials. All materials will be available on the Canvas site. This consists of lecture slides, selected set of examples of successful F30 or F31 applications from previous trainees across a broad remit of disciplines from different R1 universities (including comparative and veterinary medicine), specific guidance for each section of a grant application, and NIH study section scoring templates, rubrics, etc. Links to widely available resources from the NIH and CSTI will also be provided.

Recommended Textbooks and/or Course Materials

None.

Methods of Evaluation

Grades will be calculated based on the following:

Assignment	**Total Points (% of final grade)**
Writing Assignments (6)	100 (50%)
Class and O3 Discussions	50 (25%)
Peer Review & Mock Study Section	50 (25%)
	200 (100%)

Note: Please refer to the accompanying grading rubric for more details.

Grading Scheme

Course grades will be assigned based on the following grading scheme. This grading scale is **final**.

Letter	Scale
A	100.00 – 94.00
A-	93.99 – 90.00
B+	89.99 – 87.00
B	86.99 – 84.00
B-	83.99 – 80.00
C+	79.99 – 77.00
C	76.99 – 74.00
C-	73.99 – 70.00
D+	69.99 – 67.00
D	66.99 – 64.00
D-	63.99 – 61.00
E	60.99 – 0

Course Policies

Attendance is required for both group and one-on-one meetings with the instructor. Not participating in the discussion is the same as not coming to class at all. Attendance will be recorded on Zoom. Excused absences must be consistent with university policies in the Graduate Catalog and require appropriate documentation. Additional information can be found in Attendance Policies. Our primary goal is to deliver a high-quality educational experience that prepares students effectively for their professional careers, which necessitates active and consistent participation in courses.

Curriculum Policies

PhD curriculum policies are consistently held and reinforced across all courses. Please review the curriculum policies listed within the Online Student Handbook.

University Policies

All courses adhere to the University of Florida Syllabus Policies. The provided link is regularly maintained to guarantee the accuracy and consistency of these policies UF Syllabus Policies.

Community Respect

The University of Florida College of Veterinary Medicine strives to cultivate an atmosphere of respect, empathy, and open-mindedness within an exceptional community of students, faculty, and staff. It is our intent that students from varied backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of this course, and that the viewpoint of students brought to this course be considered a resource, strength, and benefit.

We intend to present materials and activities that are respectful to all. Your suggestions are encouraged and appreciated. Please let us know ways to improve the course's effectiveness for you personally or for other students or student groups.

If any of our course meetings conflict with any of your religious events or practices, an excused absence will be provided when requested using the standard UF CVM Absence Request Form process as detailed in the https://education.vetmed.ufl.edu/dvm-curriculum/absence-request/

If you feel that you have experienced or witnessed any bias/treatment that falls short of these expectations, you may submit a report through the UF CVM Student Mistreatment Report.

Students with Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting www.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. **Students in UF Health Sciences programs should be mindful that unique course accommodations may not be applicable in a clinical, fieldwork or practicum setting. Thus, planning a semester in advance with the**

DRC Health Sciences Learning Specialist is highly encouraged. Our learning specialist can be contacted at the following email address: DRC@ufsa.ufl.edu**.**

The DRC is located on the main UF campus. ASA (Office for Academic and Student Affairs) works closely with the DRC to ensure student accommodations are met in the classroom and during exams. Sabrina Barot in ASA assists in coordinating exams and meeting recommended disability-related requirements for students with accommodations (studentaffairs@vetmed.ufl.edu).

Student Use of Artificial Intelligence (AI)

When authorized by the course coordinator, students may use AI technologies in the completion of coursework as long as they cite all such use by naming the technology and how it was employed. Students assume full responsibility for all content, including errors and omissions. Assistive technology authorized as part of an accommodation for a disability is always permitted.

Course instructors may adjust limitations on AI technology use and must communicate any limitations to students sufficiently in advance of the assignment due date. Failure to cite the use of AI technology or disregarding specific course limitations is considered academic misconduct. **The use of AI on assignments, essays/reflection papers, exams, and quizzes when prohibited by course or college instructions is considered cheating** and students are violating the UF Regulations 4.040 Student Honor Code and Student Conduct Code.

It is important to note that many generative AI models (e.g., ChatGPT, ChatSonic, Google Bard, etc.) place any information that they are provided with into the public domain. When using such tools, students must therefore ensure that the tools are **never provided with confidential information**. For the avoidance of doubt, the use of such tools is prohibited for generating any confidential communications, including, but not limited to, communications relating to patient records, clients, students, and intellectual property. Students are also reminded that they should always review the terms and conditions of any third-party software being used (e.g., proof reading tools) to ensure that any data the tools are provided with are appropriately protected. Students should always verify information and sources generated by AI tools. AI has inherent bias and has been known to generate false information and to cite non-existent sources. Also, because AI-generated text mines people's intellectual property without appropriate credit, this raises ethical concerns.

It is not acceptable for students to use generative AI for reflective writing, as by its very nature, the process of reflective writing demands that the individual actively engages in the writing process. Delegating this to a natural language processing algorithm may produce convincing outputs, but does not demonstrate development in an individual's professional practice.

Students are responsible for understanding their dynamic data stewardship responsibilities to minimize personal, college, and university risk.

UF Integrated Risk Management – CHATGPT Privacy, Factual Accuracy and Usage Guidelines

Appendix A: Grading Rubric

This grantsmanship course grading rubric evaluates a student's ability to construct a complete*, professional-quality grant proposal that meets the requirements of various federal funders.
*For this course the template is a Fellowship F30/31 application to the US NIH. “Complete” includes all components for the F31 except for the budget and mentor’s statement.

Overall proposal quality (40 points)

This category evaluates the entire proposal with specific focus on adherence to instructions and delivering a professional product. The raw score below is multiplied by 4.

Criteria	Excellent (9-10)	Adequate (7-8)	Needs Improvement (5-6)	Poor (<4)
Completeness and submission	All required sections and attachments are completed and submitted on time as described in the syllabus.	Most required sections are present; supporting documents were missing initially but subsequently provided within 1-week of the deadline.	Significant parts of the application are missing, or the submission is late beyond 1-week after the deadline.	The application is largely incomplete or was not submitted.
Formatting and clarity	Proposal is free of grammatical, spelling, and formatting errors. Writing is clear, concise, and easy to follow. All prior edits from the previous iterations are addressed. Avoids excessive jargon and is generally accessible to non-specialists. References are complete and appropriate.	Minor errors exist but do not significantly distract the reader. The proposal and supporting documents are easy to follow, potentially to non-specialists. Some citations are missing. Jargon use is profound.	Significant errors and formatting issues remain; the proposal is difficult to read and understand and citations are clearly missing. Overly verbose and lacks conciseness.	The proposal contains unacceptable levels of errors, distracting significantly from the readability of the proposal

Proposal components (60 points)

This category assesses the completeness and clarity of each component of the proposal. There are 10 pts for each writing assignment x 6 assignments (60 points).

Criteria	Excellent (9-10)	Adequate (7-8)	Needs Improvement (5-6)	Poor (<4)
NIH Biosketch	Clearly written within the page limits of the NIH biosketch format. Presents all the positive assets of the applicant clearly and contextually with respect to prior scholarly work and achievements/awards.	Includes all the required elements but may lacks polish. Does not effectively “sell” the applicant.	Some of the sections remain incomplete, formatting errors abound.	Did not follow the template guidelines or did not submit the component.
Research significance and innovation (Specific aims and research training plan)	Clear and compelling “hook”; identifies a significant scientific gap in knowledge and proposes an innovative solution. The proposal demonstrates a deep understanding of the field.	Identifies a significant problem and proposes a relevant solution. The approach is sound, but its innovation and significance could be more clearly articulated.	Identifies a relevant topic, but its broader significance is not fully developed. The proposed research appears routine or lacks a clear innovation.	Fails to identify a significant problem or propose an innovative solution. The topic is unclear or not relevant to the field.

Criteria	Excellent (9-10)	Adequate (7-8)	Needs Improvement (5-6)	Poor (<4)
Approach and feasibility (Research training plan)	The proposed experimental design is logical, with clear rigorous elements and measurable outcomes. The plan is feasible within the proposed timeline and available resources. Potential pitfalls and alternatives are discussed. Although not required, preliminary data are high quality and described clearly in relation to the aims.	The experimental design is logical and feasible. However, some key details are missing, including key elements of rigor for some aims. The alternative approaches and potential weaknesses are sufficiently discussed.	The proposed methodology is flawed, has inherent feasibility concerns.	The approach is incoherent, illogical, or not feasible.
Supporting documents (Career trajectory)	All required documents are submitted, with each section clearly thought out with respect to career and training. The RCR is included and complete.	A complete plan with RCR is included, but details in each section are vague or not clearly aligned with the proposed research training plan.	The RCR is provided but otherwise the submission is incomplete.	Missing all supporting documents.

Student Engagement (100 pts)

This section assesses the student's engagement in class discussions (A) and one-on-one sessions (B) with the instructor. Both (A) and (B) are 50 points each. The score from each section is multiplied by 5.

Criteria		Excellent (9-10)	Adequate (7-8)	Needs Improvement (5-6)	Poor (<4)
(A)	**Class and one-on-one discussions**	Consistently engages in class discussions, offering thoughtful contributions and asking questions. The student is prepared for the one-on-one (O3) sessions with the instructor and demonstrates commitment to improving their grantsmanship.	Participates in both class and O3 sessions, asks questions when prompted.	Participation is infrequent or minimal. Is not prepared for O3 and does not fully engage in the O3 sessions.	Rarely participates in class. Misses scheduled O3. When present for O3, the student is disinterested.
(B)	**Quality of peer review (Mock Study Section)**	Provides constructive, detailed, and insightful feedback to peers. Identifies strengths and weaknesses effectively. Used evaluative language in the critique. Engaged in discussions following the mock study section with outside faculty reviewers.	Provides thoughtful and helpful feedback, highlighting strengths as well as areas that could use improvement in clarity or detail.	Feedback to peers is superficial or lacks specific detail. No detailed critiques or evaluative statements were provided.	Failed to provide any meaningful feedback.