THE UNIVERSITY OF TEXAS AT DALLAS

Course Syllabus – Spring 2026

Course	BUAN3301 (Traditional, face-to-face mode)
Class/Course Number	Artificial Intelligence in Business / 29271 / 016854
Professor	Ramesh Lakshmanan
Term	Spring 2026 (January 20 to May 15, 2026)
Class Level	Undergraduate
Semester Credit Hours	3 semester credit hours
Target Audience	All JSOM Undergrad Majors
Class Locations	BUAN3301.503: **Monday** from 7:00 pm to 9:45 pm — **ECSW 3.250** BUAN3301.504: **Wednesday** from 7:00 pm to 9:45 pm — **JSOM 12.222**

Professor's Contact Information

- **Office Phone** (TBD) : **Other Phone** None **TA Name** None **Email Address** rxl220015@utdallas.edu
- **Office Hours** Tuesday from 8:00 p.m. to 9:00 p.m. by appointment, block time in calendar @rxl220015 **(rxl220015@utdallas.edu)** or email for any offline questions.

Course Description (As in Catalog/Coursebook)

Acclimates to the fundamental concepts and applications of Artificial Intelligence (AI) in the business world, covering how AI technologies can be used to solve business problems, enhance decision-making, and drive innovation. Addresses ethical considerations and the impact of AI on various business functions, and the primary use cases on AI in Business, such as Sales and Marketing, Finance, Supply Chain, Healthcare, and Information Systems.

Course Objectives:

- Assess the power of AI by evaluating its business impact around productivity, efficiency, automation
- Experience the primary use cases for AI in key domains such as Sales & Marketing, Healthcare, Supply Chain, Manufacturing, Operations Management, Sports & Entertainment, Information Systems and more
- Hands-on experience in the rapidly growing field of Generative AI including ChatGPT and Copilot, and best practices including Prompt Engineering
- Build awareness for Responsible AI including ethics, privacy, bias prevention and governance

Textbooks/Learning Platform:

1. Lecture notes thru eLearning
2. Supplemented with additional reading materials provided thru links in the lecture notes and/or eLearning

Technology Platform:
Publicly available Gen AI platforms such as ChatGPT, Copilot, Gemini

Group Work:
No graded group work is planned

Lecture Outline & Schedule
Note : *The content and schedule below is subject to change at the discretion of the Professor and will be communicated in class.*

BUAN3301.503: Monday from 7:00 pm to 9:45 pm — ECSW 3.250			
Week #	**Mon (Date)**	**Description**	**Exercise**
Week 1	01/26	*Introductions, Syllabus Overview & Class Expectations* *Introduction to AI*: History, Hype Cycles, Present Day *AI Evolution & Strategy*: ANI vs. AGI vs. ASI; The 3 A's (Automation, Augmentation, Acceleration); *Teaser*: Enterprise Persons and Industry use-case highlights	
Week 2	02/02	Types of AI: (Knowledge Based Systems, Machine Learning, Deep Learning, Generative AI, Agentic AI) The AI Market: Sizing the opportunity (TAM, SAM, SOM); Hardware vs. Software vs. Services; Market leaders (NVIDIA, Microsoft, OpenAI) **Inclass Discussions / Student / Group discussions "AI Types in the Wild"** Small groups pick 1 everyday product (Maps, Netflix, bank app) and label where it uses Knowledge-based vs ML vs Deep Learning vs GenAI vs Agents.	Quiz/ Exercise on Knowledge Rules
Week 3	02/09	AI for Personal Productivity: AI-Powered Tools for Time Management, Communication and Collaboration, Creativity with AI (brainstorming and idea generation.)	
Week 4	02/16	AI in Sales and Marketing: Market Segmentation and Targeting, Social Media and Advertising, Demand Generation, Recommendation Engine, Propensity to Buy, Forecasting, Salesforce Optimization, Sales Training, Pricing **Inclass Discussions / Student / Group discussions - "Marketing Use-Case Debate: What Actually Moves Revenue?"** Teams argue which single AI capability matters most (segmentation vs propensity vs forecasting vs pricing vs recommender), and defend with a quick example.	Quiz/ Exercise on Customer Segmentation

BUAN3301.503: Monday from 7:00 pm to 9:45 pm — ECSW 3.250			
Week #	**Mon (Date)**	**Description**	**Exercise**
Week 5	02/23	Generative AI: Generative AI ModelsMajor AI Software and Hardware Providers: Open Source, Cloud Providers (MSFT, GOOGLE, AWS), Open AI, NVIDIA, Deep Seek, Perplexity, Grok	
Week 6	03/02	Harnessing Generative AI: Prompt Engineering, DataChallenges: Hallucinations, Data Privacy AI for Software Dev: Code generation, Quality Assurance, Synthetic Data **Inclass Discussions / Student / Group discussions — "Prompt Showdown: Same Task, Different Prompts"** Groups craft prompts for the same business task (email, summary, plan) and compare results + discuss hallucination/privacy risks.	Quiz/ Exercise on Prompt Engineering
Week 7	03/09	AI in the Office: Creating presentations, generating concepts, reviewing and summarizing documents Data Needs for AI: Structured, Unstructured, Semi-structured;Data Privacy and Security	
	03/16–03/22	SPRING BREAK	
Week 8	03/23	Business of AI: Prioritizing Use-Cases, Revenue Streams, Cost Components, Managing Risk, AI GovernanceDeveloping and Presenting a Business Case: Key elements including ROI, Payback **Inclass Discussions / Student / Group discussions - "ROI & Risk Roundtable"** Each group chooses a use-case and states: value metric, cost driver, key risk, and one governance control—then a 60-second share-out.	Quiz/ Exercise on Developing a Business Case
Week 9	03/24–03/29	MIDTERM EXAM at UTD TEST CENTER See below under Exams	Take Exam at UTD Test Center
Week 10	03/30	AI for Customer Service; Customer Feedback, Customer Support, Customer Churn, Customer Loyalty, Social Media, Virtual Assistants **Inclass Discussions / Student / Group discussions : "Customer Service Triage Simulation"** Groups handle a mock surge (angry customers + backlog) and decide: automation vs human handoff, escalation rules, and what to measure (CSAT, AHT, churn).	Quiz/ Exercise on Customer Service Agent
Week 11	04/06	AI in Entertainment: Content Personalization, Targeted Ads, Content Recognition, Creative Assistant;AI in Sports: Sports Management, Coaching Assistance, Game Strategy.	

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Week 12	04/13	AI in Manufacturing: Factory Planning and Scheduling, Process Automation, Digital TwinAI in Automotive: Autonomous vehicles, Driving Behavior, Driver SafetyAI in Operations Management: Sales & Operations Planning, Network Planning, Scheduling, Procurement Intelligence	Quiz/ Exercise on Forecasting
Week 13	04/20	AI in Healthcare: Robot Assisted Surgery, Workflow Assistance, Image Diagnosis, Virtual Assistants, Fraud Detection, Wearables, Drug Discovery Finance and Risk Management: Personalized Finance, Investment Banking, Asset Management, Fraud Detection AI in Real-Estate: Demand Generation, Pricing, Predictive Maintenance, Virtual Assistants, Buy/Sell/Hold Decision Support	Quiz/ Exercise on Ethical use of AI
Week 15	04/27	AI for Human Resources Management: Recruitment, Turnover, Scheduling, Employee Engagement, Performance Management, Training AI Ethics: Responsible AI, Governance, Privacy, Bias Prevention, Socio-Economic impacts Final Review: Career paths in AI; Building your AI Roadmap; Course Wrap-up	
Week 16	05/04–05/15	FINAL EXAM at UTD TEST CENTER See below under Exams	Take Exam at UTD Test Center

BUAN3301.504: Wednesday from 7:00 pm to 9:45 pm — JSOM 12.222			
Week #	**Wednesday (Date)**	**Description**	**Exercise**
Week 1	01/21	*Introductions, Syllabus Overview & Class Expectations* *Introduction to AI:* History, Hype Cycles, Present Day *AI Evolution & Strategy:* ANI vs. AGI vs. ASI; The 3 A's (Automation, Augmentation, Acceleration); *Teaser*: Enterprise Persons and Industry use-case highlights	
Week 2	01/28	Types of AI: (Knowledge Based Systems, Machine Learning, Deep Learning, Generative AI, Agentic AI)	Quiz/ Exercise on

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		The AI Market: Sizing the opportunity (TAM, SAM, SOM); Hardware vs. Software vs. Services; Market leaders (NVIDIA, Microsoft, OpenAI) **Inclass Discussions / Student / Group discussions "AI Types in the Wild"** Small groups pick 1 everyday product (Maps, Netflix, bank app) and label where it uses Knowledge-based vs ML vs Deep Learning vs GenAI vs Agents.	Knowledge Rules
Week 3	02/04	AI for Personal Productivity: AI-Powered Tools for Time Management, Communication and Collaboration, Creativity with AI (brainstorming and idea generation.)	
Week 4	02/11	AI in Sales and Marketing: Market Segmentation and Targeting, Social Media and Advertising, Demand Generation, Recommendation Engine, Propensity to Buy, Forecasting, Salesforce Optimization, Sales Training, Pricing **Inclass Discussions / Student / Group discussions - "Marketing Use-Case Debate: What Actually Moves Revenue?"** Teams argue which single AI capability matters most (segmentation vs propensity vs forecasting vs pricing vs recommender), and defend with a quick example.	Quiz/ Exercise on Customer Segmentation
Week 5	02/18	Generative AI: Generative AI ModelsMajor AI Software and Hardware Providers: Open Source, Cloud Providers (MSFT, GOOGLE, AWS), Open AI, NVIDIA, Deep Seek, Perplexity, Grok	
Week 6	02/25	Harnessing Generative AI: Prompt Engineering, DataChallenges: Hallucinations, Data Privacy AI for Software Dev: Code generation, Quality Assurance, Synthetic Data **Inclass Discussions / Student / Group discussions — "Prompt Showdown: Same Task, Different Prompts"** Groups craft prompts for the same business task (email, summary, plan) and compare results + discuss hallucination/privacy risks.	Quiz/ Exercise on Prompt Engineering
Week 7	03/04	AI in the Office: Creating presentations, generating concepts, reviewing and summarizing documents Data Needs for AI: Structured, Unstructured, Semi-structured;Data Privacy and Security	

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Week 8	03/11	Business of AI: Prioritizing Use-Cases, Revenue Streams, Cost Components, Managing Risk, AI GovernanceDeveloping and Presenting a Business Case: Key elements including ROI, Payback **Inclass Discussions / Student / Group discussions - "ROI & Risk Roundtable"** Each group chooses a use-case and states: value metric, cost driver, key risk, and one governance control—then a 60-second share-out.	Quiz/ Exercise on Developing a Business Case
	03/16–03/22	SPRING BREAK	
Week 9	03/24–03/29	MIDTERM EXAM at UTD TEST CENTER See below under Exams	Take Exam at UTD Test Center
Week 10	04/01	AI for Customer Service; Customer Feedback, Customer Support, Customer Churn, Customer Loyalty, Social Media, Virtual Assistants **Inclass Discussions / Student / Group discussions : "Customer Service Triage Simulation"** Groups handle a mock surge (angry customers + backlog) and decide: automation vs human handoff, escalation rules, and what to measure (CSAT, AHT, churn).	Quiz/ Exercise on Customer Service Agent
Week 11	04/08	AI in Entertainment: Content Personalization, Targeted Ads, Content Recognition, Creative Assistant;AI in Sports: Sports Management, Coaching Assistance, Game Strategy.	
Week 12	04/15	AI in Manufacturing: Factory Planning and Scheduling, Process Automation, Digital TwinAI in Automotive: Autonomous vehicles, Driving Behavior, Driver SafetyAI in Operations Management: Sales & Operations Planning, Network Planning, Scheduling, Procurement Intelligence	Quiz/ Exercise on Forecasting
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Week 15	04/29	AI for Human Resources Management: Recruitment, Turnover, Scheduling, Employee Engagement, Performance Management, Training AI Ethics: Responsible AI, Governance, Privacy, Bias Prevention, Socio-Economic impacts Final Review: Career paths in AI; Building your AI Roadmap; Course Wrap-up	
Week 16	05/04–05/15	FINAL EXAM at UTD TEST CENTER See below under Exams	Take Exam at UTD Test Center

Exercises:
Note : *The content and schedule for the Exercises below is subject to change at the discretion of the Professor.*

Work for the Exercises is expected to be done individually.

- Exercise 1: Exercise on Rules:
- Exercise 2: Exercise on Customer Segmentation
- Exercise 3: Exercise on Prompt Engineering
- Exercise 4: Exercise on Business Case
- Exercise 5: Exercise on Customer Service Agent
- Exercise 6: Exercise on Forecasting
- Exercise 7: Exercise on Ethical use of AI

Project Work: None

Exams:
- There will be one 1.5 hour multiple choice **Midterm Exam** and one 1.5 hour multiple choice **Final Exam**. Both are to be taken at the UTD Test Center. **The Midterm exam will be available from 03/24–03/29 during Test Center hours**. **The Final exam will be available from 05/04–05/15 during Test Center hours**.
- Begin registering for the exam early and in advance, as soon as Fall classes begin (**recommended**), or no later than 48 hours prior to the exam time via this link **https://ets.utdallas.edu/testing-center/students/**
- Review the **Student Guidelines** prior to taking your first exam at the center.
- ARC students with approved accommodations should review the **ARC Testing Guidelines** prior to taking their exam at the center.
- Both Exams will be worth 30% each (total of 60%) of your final grade.

Grading:

Note : *The grading criteria below is subject to change at the discretion of the Professor and will be communicated in class.*

Class Participation	5%	Individual
Exercises / Quiz / Participation / Discussions	35%	Individual
Midterm	30%	Individual
Final	30%	Individual
Total	**100%**	
Bonus	5%	Individual

Opportunities for Bonus points will be announced during class

Grading Scale

Scaled Score	Letter Equivalent
>= 95.0	A
>= 90.0 and < 95.0	A-
>= 87.0 and < 90.0	B+
>= 83.0 and < 87.0	B
>= 80.0 and < 83.0	B-
>= 77.0 and < 80.0	C+
>= 73.0 and < 77.0	C
>= 73.0	P
Less than 73.0	F

Class Size:

Max of 72 per section.

Course & Instructor Policies:

Adherence to instructions will be considered an important part of the grade. The professor's assessment of the grades is final.

Late work is not allowed after the deadline or via email submission. There will be assignment submission links provided on eLearning. Zero credit for not adhering to the deadlines. In case of family or medical emergency, which is beyond student's control, a medical report is required including physician's information. In situations where the professor allows considering an emergency case, professor will assess the situation for penalty of points if there should be any, as many decisions are case to case basis.

In email communication, please mention the course number in the subject line and use UT Dallas email address. Non-UT Dallas email addresses may not get responses due to them ending up in spam folders. Apart from that, please provide 3 working days' time to the professor and TA to respond before emailing again. Professor and TA will email as soon as possible, however sometimes responses may take up to 3 working days.

It is the student's responsibility to check for updates in eLearning. There will be series of updates throughout the semester to provide timely information and/or updates and/or reminders.

Cell phone use is not allowed during class or exam. eLearning will be used for class content. Slides and other materials will be posted after class is held. Avoid personal conversations during lectures.

Maintain academic integrity. Academic dishonesty involves the abuse and misuse of information or people to gain an undeserved academic advantage or evaluation. Common forms include:

- Cheating – using deception in the taking of tests or the preparation of written work, using unauthorized materials, copying another person's work with or without consent, or assisting another in such activities.
- Lying – falsifying, fabricating, or forging information in either written, spoken, or video presentations.

- Plagiarism – using the published writings, data, interpretations, or ideas of another without proper documentation. Plagiarism includes copying and pasting material from the internet into assignments without properly citing the source of the material.

Episodes of academic dishonesty are reported to the Vice President for Academic Affairs. The potential penalty for academic dishonesty includes a failing grade on a particular assignment, a failing grade for the entire course, or charges against the student with the appropriate disciplinary body.

Students with Disabilities

It is the policy and practice at UT Dallas to make reasonable accommodation for students with properly documented disabilities. However, written notification from the Accessibility Resource Center (ARC) is required. If you are eligible to receive accommodation and would like to request it for this course, please discuss it with me during office hours and allow for one week's advance notice. Students with any questions about their eligibility for receiving accommodation should contact the OSA office first.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved ARC accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Attendance

Regular and punctual physical class attendance is expected (and graded). Students who fail to attend class regularly are inviting scholastic difficulty. Remote/virtual/online attendance is not counted or considered as the instruction mode is face-to-face.

Class Participation

Regular class participation is expected. This includes engaging in class Q&A, discussions, lessons learned in Projects and Exercises. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures. Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.