



AI/BUS/PSYC 320: AI and Human Behavior in Organizations

Course Syllabus

Summer Session I 2025

Instructor: Chelsey Pienaar

Credits: 3

Contact Hours: 45

Prerequisites: None

Class Meeting Days & Time: TBA

Office Hours: by appointment after a class or via Zoom (see Moodle site)

Course Type: Standard Course

Course Fee: TBA

Course Description

What drives our decisions in a world increasingly influenced by artificial intelligence? How do psychological principles inform our interactions with this technology, and how can we use these insights to create meaningful change in business? In this course, we explore the interplay between human behavior and AI, examining key psychological theories that impact our understanding of motivation, decision-making, and social dynamics.

Through the lens of current research, we'll challenge conventional beliefs about human nature, and explore how psychological and social factors shape our interactions with AI. We will analyze how AI can be used to predict, influence, and optimize human interactions in business settings, and investigate how perceptions of good science have evolved alongside advancements in AI technology, prompting us to reconsider what constitutes rigorous inquiry. Together, we will engage in real-world case studies to identify the presence of bias in AI models and assess ethical implications when applying AI to decision-making in diverse organizational contexts.

By the end of this course, you will not only have gained a deeper understanding of AI in human behavior, but also the practical skills to apply this knowledge in real-world scenarios, and lead with insight and empathy in a future-forward business.

Learning Outcomes and Assessment Measures

Below are the course's learning outcomes, followed by the methods that will be used to assess students' achievement for each learning outcome. By the end of this course, students will be able to:

- *explain* the relationship between key psychological theories and AI in the context of business decision-making. (Course Journal, Case Study Project);
- *evaluate* the impact of biases in AI models and how they affect human behavior and decision-making in organizational settings. (Course Journal, Bias Analysis Mini Project);
- *create* a case study that demonstrates how psychological theories and AI can be used to address a real-world business problem (Course Journal, Case Study Project);
- *apply* psychological theories to an AI strategy to enhance employee engagement, motivation, and leadership within an organization. (Course Journal, Case Study Project);
- *reflect* on the ethical considerations of implementing AI in diverse business settings. (Course Journal, Ethical Dilemma Analysis).

Course Materials

Readings

A course reader, including all the indicated readings, will be available. The course's Moodle site is the primary location for readings and assignments.

Assessment

Attendance	10%
Bias Analysis Mini Project	15%
Case Study Outline Presentations	15%
Ethical Dilemma Analysis	15%
Course Journal	20%
Final Case Study Presentation	25%

Grading

Students are reminded that it is their responsibility to note the dates of exams and other assignments. No alternative exam dates will be offered and professors are not required to give partial credit for any late work (they do so at their discretion: the Institute's default policy is no extensions and a zero for any work turned in late). Students who book travel when they have an exam or other assessment will have to change their plans or accept a zero. Letter grades for student work are based on the following percentage scale:

Letter Grade Range	Numerical Score Equivalent	Student Performance
A	93% - 100%	Exceptional
A-	90% - 92%	Excellent
B+	87% - 89%	Superior
B	83% - 86%	
B-	80% - 82%	
C+	77% - 79%	Satisfactory
C	73% - 76%	
C-	70% - 72%	
D+	67% - 69%	Low Pass
D	63% - 66%	
D-	60% - 62%	
F	59% or less	Fail (no credit)

Please note: decimal numerals between 1-4 are rounded down while 5-9 are rounded up: e.g., expect 89.4 to be 89.0 while 89.5 to round up to 90.

Course Requirements

Grades are based on the following criteria.

Attendance (10%)

Attendance is an essential part of this course. If you attend all the meetings, you will receive 10% for this part of your grade. There are no make-ups offered for attendance..

Course Journal (20%)

Students will maintain a digital Course Journal to practice AI prompting techniques and critically analyze AI-generated responses in relation to course content. Each week, students will craft a thoughtful prompt related to that week's topic (e.g., cognitive biases in AI, emotional intelligence, AI in decision-making) and assess the response generated by an AI tool (such as ChatGPT).

Each journal entry (300 words) should include:

- The Prompt: Clearly state the exact prompt you used and explain your rationale for structuring it that way.
- AI's Response: Summarize or include key excerpts from the AI-generated response.
- Evaluation & Analysis: Assess the accuracy, depth, and relevance of the response based on course concepts. Did the AI demonstrate an understanding of key theories? Where did it fall short?

- Prompt Engineering Reflection: If needed, refine your prompt and document how adjustments improved (or didn't improve) the response. What strategies helped generate a more accurate, relevant, or nuanced answer?
- Connection to Real-World Applications: Reflect on how the AI's response relates to real-world examples or challenges in psychology, business, and AI applications.

The journal will be graded twice during the semester: once in Week 3 and again at the end of the course (Week 5). Each grading checkpoint is worth 10% of your final grade (20% total).

See the full guidelines on Moodle for detailed instructions and grading criteria.

Bias Analysis Mini Project (15%)

Students will identify a real-world example of bias in AI (e.g., hiring algorithms, facial recognition, healthcare AI), analyze the psychological and technical factors contributing to the bias, and propose potential solutions. The project will be submitted as a 3–4 page written analysis. The bias analysis mini project will be due at the end of Week 2.

Case Study Outline Presentations (15%)

Students will present their initial case study idea in a short 5-10 minute pitch, outlining the AI-related issue, psychological concepts, and organizational context. Each student will provide constructive feedback to at least two peers to refine their case studies before final submission. Outline presentations will take place in class during Week 3 (Meeting 12).

Ethical Dilemma Analysis (15%)

Students analyze a provided AI ethics scenario (or propose their own with approval), and then apply psychological and ethical frameworks to assess risks, stakeholder perspectives, and potential resolutions. The assessment will be submitted as a structured 3-4 page written analysis. The ethical dilemma analysis will be due at the end of Week 4.

Final Case Study Presentations (25%)

For their final case study presentations, students will develop a comprehensive case study (8–10 pages) exploring an AI application in an organizational setting. The case study will integrate psychological theories, ethical considerations, and business implications, while demonstrating how AI can be used to predict, influence, or optimize human interactions within an organization (or externally for client or customer interactions). Students will be allowed to use AI to support them in brainstorming, summarising, and generating content for their case studies. After the presentation, students will be asked to reflect on their experience of AI as a 'collaborator' in completing this work. Students will present key findings in a 10-minute final presentation. Final presentations will take place in class during Week 5 (Meeting 19).

Extension & Submitting Late Work

Work submitted after the deadline will receive a grade of zero, not partial credit. Each student is allowed one extension of 24 hours over the entire semester. This can be used for any assignment but the final project. Students need to email the instructor before the deadline and inform the instructor of their use of the extension. Any work submitted after the 24-hour extension will be marked zero. As for all policies, exceptions can be made by the Director for students with special accommodations or in case of medical emergencies, etc.

Attendance Policy

Attendance is expected and mandatory for classroom times and co-curricular activities. The first two absences per course due to illness will be considered excused "sick days" and do not require medical documentation. To receive additional excused absences due to illness, students are required to see a local physician or request a letter from an Institute-approved doctor documenting they should be excused from class for illness.

Unexcused absences will adversely affect a student's academic performance and will result in a reduction of the student's final course grade by 2% per absence up to a maximum of 10%. Excessive unexcused absences may result in a failing grade or disciplinary action. It is the student's responsibility to be aware of the number of absences or late arrivals for each course, and to ask the instructor when in doubt.

If students miss class, they are responsible for obtaining class notes from other students and/or for meeting the professor during office hours. Any work missed in class because of an excused absence may be made up within

one week of the return to the class. Any work missed that was a quiz or other test must be made up outside of class time and will, in the interest of intellectual honesty, be a slightly different test than the one given in class. Presence during mandatory field trips is especially important. Missing a mandatory field trip for a course, unless for a very serious reason that is communicated to Umbra staff in a timely manner, will lower the students' grade by half a letter grade (i.e., a final grade of a B+ would be lowered to a B).

Legitimate reasons for an excused absence or tardiness include death in the immediate family, religious observances, illness or injury, local inclement weather, and medical appointments that cannot be rescheduled.

Absences relating to illness may be excused by the Director, but only if a medical certification is provided. Students who request an approved absence to observe a religious holiday must submit a formal request to the Institute's Director within one week after the add/drop period when course schedules, including any field trips, are finalized. No exceptions will be made after this deadline.

Except in the case of medical emergencies, absences are not accepted when tests are scheduled; tests cannot be made up. Furthermore, scheduled times and dates indicated for exams, quizzes, oral presentations, and any other graded assignments cannot be changed for any reason. Even if more sections of the same class are activated, students may only take exams during the scheduled times and dates for the section they are enrolled in.

Tardiness Policy

Students are expected to attend all classes punctually. Any student arriving up to 15 minutes late or leaving up to 15 minutes earlier than the scheduled class end time will be marked as tardy. Each incident of tardiness (late arrivals to or early departures from class) is 0.5% off the final grade. However, should a student arrive more than 15 minutes late or depart more than 15 minutes before the conclusion of the class, it will be recorded as an absence.

Students are also expected to remain in class during the time of instruction except for a reasonable amount of time to use the restroom. Students who leave class and do not return during the class session will receive an unexcused absence or late penalty.

Academic Integrity

All forms of cheating (i.e., copying during exam either from a fellow student or making unauthorized use of notes) and plagiarism (i.e., presenting the ideas or words of another person for academic evaluation without acknowledging the source) will be handled according to the Institute Academic Policy, which can be found in the Umbra Institute Academic Policies and Conduct Guidelines.

Utilizing ChatGPT or other artificial intelligence (AI) tools for the generation of content submitted by a student as their own as part of any assignment for academic credit at the Institute constitutes a form of plagiarism. Should the Institute become aware of a student's use of such platforms and services, the student will be subject to the same consequences and judicial proceedings as are in place for plagiarism (defined above).

Laptop & Classroom Policy

Students are expected to follow the policy of the Institute and demonstrate the appropriate respect for the historical premises that the school occupies. As a general rule, the consumption of food in the classroom is not permitted. Exceptions may be made at the discretion of the professor for specific cases, such as food tastings integral to the course content. Please note that cell phones must be set on silent mode before the beginning of each class, and earbuds and headsets are not allowed. Computers and laptops must be brought to every class but should remain closed and put away unless needed for AI-related exercises.

Schedule of Topics, Readings, and Assignments

WEEK 1

Foundations of AI and Human Decision-Making

Meeting 1: Introduction to AI and Human Behavior in Organizations.

What is AI? Introduction to the AI tools available to students for the course. Overview of how we'll work and learn together; assessments. Introduction to AI's impact on human behavior and decision-making in organizations: Human-AI collaboration, automation, augmentation, and predictive analytics. Case study: AI in recruitment and performance evaluation (HireVue, Amazon's AI recruitment tool).

Readings:

Davenport, T. H., & Ronanki, R. (2017, July 18). The business of artificial intelligence. Harvard Business Review. <https://hbr.org/2017/07/the-business-of-artificial-intelligence>

Russell, S., & Norvig, P. (2021). Artificial intelligence: A modern approach (4th ed.). Pearson. (Chapter 1 - Introduction)

Meeting 2: Cognitive Psychology & AI: Decision-Making in the Workplace

Introduction to cognitive psychology (how we think and choose); biases and heuristics; dual-process theory of thinking: System 1 (fast, intuitive) vs. System 2 (slow, analytical). AI as a metaphor for human cognition: Neural networks and symbolic AI. Experiment: Tversky & Kahneman (1974) – Heuristics and Biases study.

Readings:

***Kahneman, D. (2011).** *Thinking, fast and slow* (Chapters 1–4). Farrar, Straus and Giroux.

Meeting 3: Behavioral Psychology & Machine Learning: Predicting Behavior

Principles of behavioral psychology: Reinforcement, rewards, punishment; Classical and operant conditioning (Pavlov, Skinner); reinforcement learning in AI and predictive analytics. AI prediction in consumer behavior: Target's pregnancy prediction algorithm. Experiment: Skinner (1948) – Superstition in the Pigeon.

Readings:

***Thaler, R. H., & Sunstein, C. R. (2008).** *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Skinner, B. F. (1948). 'Superstition' in the pigeon. *Journal of Experimental Psychology*, 38(2), 168–172.

Meeting 4: Biases in AI & Human Judgment

Human bias and its impact on AI: Case studies and real-world examples. Sources of bias in human decision-making and AI models (confirmation bias, anchoring bias, automation bias); Identifying biases in AI: Sources and consequences. AI algorithmic bias: Examples from facial recognition and hiring AI tools.

Readings:

Silberg, J., & Manyika, J. (2019). *Tackling bias in artificial intelligence (and in humans)*. McKinsey Global Institute. Retrieved from

<https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-bias-in-artificial-intelligence-and-in-humans>

WEEK 2

AI, Motivation, and Organizational Behavior

Meeting 5: Motivation & AI-Driven Employee Engagement

Self-determination theory (Ryan & Deci) and motivation in the workplace: Intrinsic vs. extrinsic motivation. Using AI to improve employee motivation and engagement. AI-driven gamification and nudging in employee engagement (e.g., Salesforce's Work.com).

Readings:

Ryan, Richard & Deci, Edward. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *The American psychologist*. 55. 68-78.

Meeting 6: Social Influence, Norms, and Organizational Culture

Social proof, norms and conformity (Asch's conformity experiments) in the organisation. How is culture formed? AI in social influence: Recommender systems and targeted advertising. Organizational culture and AI-driven behavior modeling.

Readings:

Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass. (Chapters 1 & 2)

Starke, C., & Lünich, M. (2020). Artificial Intelligence and Its Role in Shaping Organizational Work Practices: A Systematic Review. *Administrative Sciences*, 10(4), 98.

***Koller, D., & Haller, K. (2020).** Human-centered AI design for leadership and workplace culture. In *AI and the future of organizational culture: Psychological perspectives* (Chapter 7: Human-centered AI design for leadership and workplace culture). Palgrave Macmillan.

Meeting 7: AI and Leadership: Transformational vs. Transactional Approaches

The impact of AI on leadership, and leadership on organizational AI adoption. Psychological theories of leadership: Transformational (Bass, 1985) vs. Transactional leadership. AI as a leadership support tool: Data-driven leadership decision-making. Predictive analytics in HR. Study: Avolio et al. (2009) – Leadership Models and AI Applications.

Readings:

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19–31.

Van Quaquebeke, Niels & Gerpott, Fabiola. (2023). *The Now, Next, and Next of Digital Leadership: How Artificial Intelligence (AI) Will Take Over and Change Leadership as We Know It.* *Journal of Leadership & Organizational Studies*. 30.

Wang, W., & Siau, K. (2021). *E-leadership 2.0: Meet your AI leader.* In K. Siau & W. Wang (Eds.), *Building the e-world ecosystem: Innovating and integrating technology, society, and culture* (pp. 95–105). Springer.

Meeting 8: AI for Organizational Decision-Making: Risks & Rewards

Decision-making models: Rational vs. bounded rationality (Simon, 1955). AI in strategic decision-making: Predictive analytics in finance and HR. Ethical risks: AI in performance monitoring and hiring.

Readings:

***Tversky, A., & Kahneman, D. (1974).** Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124–1131. <https://doi.org/10.1126/science.185.4157.1124>

Assessments:

Bias Analysis Mini Project (15%); 3–4 page written analysis; Due at the end of Week 2.

Identify a real-world example of bias in AI (e.g., hiring algorithms, facial recognition, healthcare AI), analyze the psychological and technical factors contributing to the bias, and propose potential solutions.

WEEK 3

AI, Personality, and Emotional Intelligence

Meeting 9: Personality Theories: Can AI Understand Personality? Trait theory: The Big Five (McCrae & Costa, 1997). AI-driven personality analysis: IBM Watson, Cambridge Analytica. Study: Kosinski et al. (2013) – Predicting personality traits from social media.

Readings:

McCrae, R. R., & Costa, P. T. (1997). The Five-Factor Model of personality: Theoretical perspectives. In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), *Handbook of personality psychology* (pp. 159–181). Academic Press. <https://doi.org/10.1016/B978-012134645-4/50010-5>

Meeting 10: Emotional Intelligence & AI in Organizations

Goleman's emotional intelligence (EI) model. Emotional intelligence in organizational settings. AI-driven sentiment analysis: Chatbots and customer service. Case study: Affectiva's AI emotion recognition in marketing.

Readings:

Salovey, P., & Mayer, J. D. (1990). *Emotional intelligence. Imagination, Cognition and Personality*, 9(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>

Heidrich, V. (2024). *Emotional Intelligence in Artificial Intelligence: A Review and Evaluation Study*. SSRN.

Meeting 11: AI and the Future of Personalized Work Environments

AI in adaptive learning and personalized workspaces. Study: Davenport & Ronanki (2018) – AI for the Real World.

Readings:

Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108–116. <https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>

Meeting 12: Case Study Progress & Peer Review

Students present initial case study research for peer feedback.

WEEK 4

AI, Ethics, and Human-Centric AI Design

Meeting 13: Ethical Theories in Psychology & AI Ethics

Utilitarianism, Deontology, and Virtue Ethics (Bentham, Kant, Aristotle). Ethical implications of AI: Navigating responsibility, privacy and fairness in business. Ethical frameworks for AI development (Bostrom & Yudkowsky).

Readings:

***Bostrom, N., & Yudkowsky, E. (2014).** The ethics of artificial intelligence. In K. Frankish & W. M. Ramsey (Eds.), *The Cambridge handbook of artificial intelligence* (pp. 316–334). Cambridge University Press. <https://doi.org/10.1017/CBO9781139046855.020>

Gupta, A., Wright, C., Bergamaschi Ganapini, M., Sweidan, M., & Butalid, R. (2022). *State of AI Ethics Report (Volume 6, February 2022)*. Montreal AI Ethics Institute. Chapter TBC.

Meeting 14: AI and Fairness: Mitigating Algorithmic Bias

Fairness in AI: Equal opportunity vs. equal outcomes. Case study: COMPAS algorithm and bias in criminal sentencing.

Readings:

***O’Neil, C. (2016).** *Weapons of math destruction: How big data increases inequality and threatens democracy* (Chapters 1 & 5). Crown Publishing.

Gupta, A., Wright, C., Bergamaschi Ganapini, M., Sweidan, M., & Butalid, R. (2022). *State of AI Ethics Report (Volume 6, February 2022)* (Chapter 2: Analysis of the AI Ecosystem). Montreal AI Ethics Institute.

Meeting 15: Privacy and Surveillance in the AI Age

The psychology of surveillance: Chilling effects and behavior modification. Case study: Workplace AI monitoring (Amazon’s warehouse tracking).

Readings:

***Zuboff, S. (2019).** *The age of surveillance capitalism: The fight for a human future at the new frontier of power* (Chapters 3 & 8). PublicAffairs.

Bao, Yuanyu & Li, Wenlin & Ye, Yuxin & Zhang, Quanwei. (2022). Ethical Disputes of AI Surveillance: Case Study of Amazon. 10.2991/aebmr.k.220307.220.

Meeting 16: Designing Human-Centric AI Systems

Human-in-the-loop AI models: Ethical design principles. Case study: AI in healthcare decision-making.

Readings:

***Eubanks, V. (2018).** *Automating inequality: How high-tech tools profile, police, and punish the poor* (Chapter 3: High-tech Homelessness in the City of Angels). St. Martin’s Press.

Wang, G. (2019, October 20). *Humans in the loop: The design of interactive AI systems.* (Chapters 2 & 3). Stanford Institute for Human-Centered Artificial Intelligence.

<https://hai.stanford.edu/news/humans-loop-design-interactive-ai-systems>

***Coeckelbergh, M. (2020).** *AI Ethics* (Chapters 2 & 3). MIT Press.

Assessments:

Ethical Dilemma Analysis (15%); 3–4 page written analysis; Due at the end of Week 4.

Analyze an AI ethics scenario (provided, or propose your own with approval), and apply psychological and ethical frameworks to assess risks, stakeholder perspectives, and potential resolutions.

WEEK 5

The Future of AI and Human Behavior in Business

Meeting 17: Emerging Trends in AI, Psychology, and Organizational Strategy

The intersection of AI technologies, psychological principles, and organizational strategy. AI-driven predictive analytics, personalized workspaces, and the psychological impacts of AI integration in the workplace (the feeling economy), offering students a forward-looking view of AI’s potential to shape business strategy.

Readings:

***Coeckelbergh, M. (2020).** *AI Ethics* (Chapter 12: It’s the Climate, Stupid! On Priorities, the Anthropocene, and Elon Musk’s Car in Space). MIT Press.

***Keen, A. (2020).** *The feeling economy: How artificial intelligence is creating the era of empathy.* St. Martin’s Press.

Meeting 18: AI and the Future of Work: Challenges and Opportunities

AI and job displacement: The automation paradox. AI-driven workforce planning and augmentation. Study: Brynjolfsson et al. (2018) – What Can Machines Learn?

Readings:

Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies (Chapter: TBC). W. W. Norton & Company.

MIT Sloan Management Review & Databricks. (2023). *Generative AI: The CIO's guide to business transformation* (Chapters 2 & 5). MIT Sloan Management Review.

https://www.databricks.com/sites/default/files/2023-07/ebook_mit-cio-generative-ai-report.pdf

Meeting 19: Case Study Presentations

Students present final case studies, integrating psychological theories and AI applications.

Meeting 20: Final Discussion and Course Wrap-Up