Department	International College of Liberal Arts		
Semester	Fall 2025	Year Offered (Odd/Even/Every Year)	Every Year
Course Number	DATA/SOCI/QREA340		
Course Title	The Art & Science of Decision Making in an Era of Accelerating Change: Transformation/Big Data/AI		
Prerequisites	DATA/SOCI/QREA265 Science, Society & Self		
Course Instructor	RICKETTS John	Year Available (Grade Level)	3
Subject Area	Data Science	Number of Credits	3
Class Style	Lecture	Language of instruction	English

(NOTE 1) Depending on the class size and the capacity of the facility, we may not be able to accommodate all students who wish to register for the course

Course Description	Decisions affect us all. Better quality decisions mean better quality outcomes. The best decisions impact your own life, others & our world positively and lead to virtuous circles ! The course is not driven by detail, but by holistic ideas & realizations; these are largely self-evident once you know about them, and put them into practice. The cause seeks to blend the new — technological — with the old. There will be lots of group discussion in a safe space. This course will delve into the multifaceted aspects of decision-making, encompassing psychological, ethical, and practical dimensions. Students will explore various decision-making models, ethical frameworks, biases, constraints and their implications in personal, professional, and societal contexts. This course explores decision-making while highlighting the impact and integration of big data analytics. Students will examine how big data influences decision processes, ethical considerations, and the challenges of utilizing vast datasets for informed decision-making in diverse fields. Students will become more familiar with each stage in Design Thinking: Empathize, Define, Ideate, Prototype and Test. And their application. We also spend time with non-western decision making. The course will give you better confidence, credibility & tools to make better decisions for yourself, and society
Class plan based on course evaluation from previous academic year	None
Course related to the instructor's practical experience (Summary of experience)	Commercial & Academic
Learning Goals	Understand the fundamental theories and models of decision-making. Identify and analyze cognitive biases influencing decision processes. Apply ethical frameworks to decision-making scenarios. Develop strategies for effective decision-making in complex situation: Design Thinking Evaluate the impact of decisions on individuals and communities. Understand the role of AI/big data in shaping decision-making processes. Understand how data analytics and algorithms influence decision outcomes. Evaluate the ethical implications of using AI/big data in decision contexts/personalization Critically assess the challenges and opportunities of incorporating AI/big data into decision-making Critically assess the challenges and opportunities of incorporating ESG/DEI

iCLA Diploma Policy	DP1／DP2／DP3／DP4

iCLA Diploma Policy

(DP1) To Value Knowledge – Having high oral and written communication skills to be able to both comprehend and transfer knowledge

(DP2) To Be Able to Adapt to a Changing World – Having critical, creative, problem-solving, intercultural skills, global and independent mindset to adopt to a changing world

(DP3) To Believe in Collaboration – Having a disposition to work effectively and inclusively in teams

(DP4) To Act from a Sense of Personal and Social Responsibility – Having good ethical and moral values to make positive impacts in the world

Active Learning Methods	Problem-Based Learning／Discussion, Debate／Group Work
More details/supplemental information on Active Learning Methods	As Required
Use of ICT	As Required
Contents of class preparation and review	As Required	Hours expected to be spent preparing for class (hours per week)	2 hours	Hours expected to be spent on class review (hours per week)	3 hours
Feedback Methods	As Required

Grading Criteria		
Grading Methods	Grading Weights	Grading Content
in class engagement	40%	
in class quizzes	30%	
team project	30%	

Required Textbook(s)	None

Other Reading Materials/URL	Suggested: - Thinking, Fast and Slow by Daniel Kahneman - Sapiens: A Brief History of Humankind by Yuval Noah Harari - Humankind: A Hopeful History by Rutger Bregman Further reading: - Superforecasting: The Art and Science of Prediction by Philip E. Tetlock & Dan Gardner - Artificial Unintelligence: How Computers Misunderstand the World by Meredith Broussard - The I Ching or Book of Changes translated by Richard Wilhelm (or Original !!) - The Yoga Sutras of Patanjali translated by Swami Satchidananda (or Original !!) - Zen Mind, Beginner's Mind by Shunryu Suzuki - Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants by Robin Wall Kimmerer - Nudge: Improving Decisions About Health, Wealth, and Happiness by Richard H. Thaler & Cass R. Sunstein - The Black Swan: The Impact of the Highly Improbable by Nassim Nicholas Taleb - Big Data: A Revolution That Will Transform How We Live, Work, and Think" by Viktor Mayer-Schönberger & Kenneth Cukier
Plagiarism Policy	Don't do it. Does AI do it?
Other Additional Notes (Outline crucial policies and info not mentioned above)	Imagineering: Creating Value for 2034 - Using the approaches & tools we've explored throughout the course, imagine and explore something that's going to be more important in the world of 2033. - How will you create the situation to improve decisions around this issue? Team Presentation: - What's the idea? - Why is this going to be more important in 2034? - How does this make society better, and without it, worse? - How do you make this happen? Individual Short Essay: Personal feedback - What you believe you've contributed to the team. What have you learned about teamwork and what are your personal priorities to get this value realized by 2034. - No more than a page but no less than ten bullet points: Being concise and clear is important. Guest Speakers: Where possible professionals from diverse fields will share their decision-making experiences

(NOTE 2) Class schedule is subject to change

Class Schedule	
Class Number	Content
Class 1	Week 1: Introduction to Decision Making Lesson 1: Understanding Decision Making: Models and Theories Lesson 2: Cognitive Biases and Heuristics in Decision Making
Class 2	Week 1: Introduction to Decision Making Lesson 1: Understanding Decision Making: Models and Theories Lesson 2: Cognitive Biases and Heuristics in Decision Making
Class 3	Week 2: Decision Making Tools and Techniques Lesson 3: Cognitive Biases and Heuristics in Decision Making (cont.) Lesson 4: Game Theory and Decision Making
Class 4	Week 2: Decision Making Tools and Techniques Lesson 3: Cognitive Biases and Heuristics in Decision Making (cont.) Lesson 4: Game Theory and Decision Making

Class 5	Week 3: Ethics in Decision Making Lesson 5: Ethical Considerations in Decision Making Lesson 6: Ethical Dilemmas and Decision Making Frameworks
Class 6	Week 3: Ethics in Decision Making Lesson 5: Ethical Considerations in Decision Making Lesson 6: Ethical Dilemmas and Decision Making Frameworks
Class 7	Week 4: Big Data and Decision Making Lesson 7: Introduction to Big Data and Decision Science Lesson 8: Data-Driven Decision Making: Challenges and Opportunities
Class 8	Week 4: Big Data and Decision Making Lesson 7: Introduction to Big Data and Decision Science Lesson 8: Data-Driven Decision Making: Challenges and Opportunities
Class 9	Week 5: Artificial Intelligence in Decision Making Lesson 9: AI and Machine Learning in Decision Support Systems Lesson 10: AI Ethics and Decision Making
Class 10	Week 5: Artificial Intelligence in Decision Making Lesson 9: AI and Machine Learning in Decision Support Systems Lesson 10: AI Ethics and Decision Making
Class 11	Week 6: Non-Western Perspectives on Decision Making Lesson 11: Introduction to Non-Western Decision Making Philosophies Lesson 12: The I-Ching: Understanding Its Role in Decision Making
Class 12	Week 6: Non-Western Perspectives on Decision Making Lesson 11: Introduction to Non-Western Decision Making Philosophies Lesson 12: The I-Ching: Understanding Its Role in Decision Making
Class 13	Week 7: Eastern Philosophies and Decision Making Lesson 13: Yoga and Non-Dualistic Perspectives in Decision Making Lesson 14: Zen and the Art of Decision Making
Class 14	Week 7: Eastern Philosophies and Decision Making Lesson 13: Yoga and Non-Dualistic Perspectives in Decision Making Lesson 14: Zen and the Art of Decision Making

Class 15	Week 8: National Decision Making Systems Lesson 15: National Cultures and Decision Making Lesson 16: Learning from Indigenous Decision Making Practices
Class 16	Week 8: National Decision Making Systems Lesson 15: National Cultures and Decision Making Lesson 16: Learning from Indigenous Decision Making Practices
Class 17	Week 9: Integrating Perspectives Lesson 17: Synthesizing Western and Non-Western Approaches Lesson 18: Case Studies: Integrating Multiple Decision Making Frameworks
Class 18	Week 9: Integrating Perspectives Lesson 17: Synthesizing Western and Non-Western Approaches Lesson 18: Case Studies: Integrating Multiple Decision Making Frameworks
Class 19	Week 10: Decision Making in Complex, Trans-national Environments Lesson 19: Decision Making in Uncertainty and Complexity Lesson 20: Adaptive Decision Making and Resilience
Class 20	Week 10: Decision Making in Complex, Trans-national Environments Lesson 19: Decision Making in Uncertainty and Complexity Lesson 20: Adaptive Decision Making and Resilience
Class 21	Week 11: Influencing Decision Making Lesson 21: Is this possible? Lesson 22: What works and why?
Class 22	Week 11: Influencing Decision Making Lesson 21: Is this possible? Lesson 22: What works and why?
Class 23	Week 12: Decision Making & Well-being Lesson 23: Decision Making and Mental Health Lesson 24: Mindfulness and Decision Making
Class 24	Week 12: Decision Making & Well-being Lesson 23: Decision Making and Mental Health Lesson 24: Mindfulness and Decision Making

Class 25	Week 13: Future of Decision Making Lesson 25: Future Trends: AI, Ethics, and Decision Making Lesson 26: Integrative Project Presentations and Reflection
Class 26	Week 13: Future of Decision Making Lesson 25: Future Trends: AI, Ethics, and Decision Making Lesson 26: Integrative Project Presentations and Reflection
Class 27	Week 14: Imagineering (Team): Creating & building value: application of skills, tools & mindset to engage meaningfully with the world
Class 28	Week 14: Imagineering (Team): Creating & building value: application of skills, tools & mindset to engage meaningfully with the world
Class 29	Week 15: Imagineering (Team): Creating & building value: application of skills, tools & mindset to engage meaningfully with the world
Class 30	Week 15: Imagineering (Team): Creating & building value: application of skills, tools & mindset to engage meaningfully with the world