

Department	International College of Liberal Arts		
Semester	Spring 2025	Year Offered (Odd/Even/Every Year)	Every Year
Course Number	DATA/QREA280		
Course Title	AI Discovery: Foundations & Discovery		
Prerequisites	DATA/SOCI/QREA265 Science, Society & Self		
Course Instructor	RICKETTS John	Year Available (Grade Level)	2
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	<p>AI Discovery provides a comprehensive introduction to the fundamentals of Artificial Intelligence.</p> <p>The course is divided into two main phases: foundational learning &amp; student-directed discovery.</p> <p>In the first phase, students will learn core AI concepts, techniques, &amp; tools.</p> <p>The second phase allows students to explore AI capabilities through self-directed projects, with findings shared &amp; discussed in class to build a collective repository of knowledge &amp; applications.</p>
Class plan based on course evaluation from previous academic year	<p>This undergraduate curriculum in AI consists of two main courses: AI Discovery &amp; AI in Action.</p> <p>The combined courses provide students with a strong foundation in AI fundamentals, foster student-directed exploration of AI capabilities, and apply these skills to real-world problems. The curriculum is suitable for students with both technical &amp; liberal arts backgrounds, ensuring an interdisciplinary approach to AI usage and application.</p> <p>After completing students will be able:</p> <ol style="list-style-type: none"> <li>1. To assess the importance &amp; focus upon AI in any given setting.</li> <li>2. Utilize AI for personal &amp; professional use.</li> <li>3. Work in interdisciplinary &amp; diverse teams to deliver capability and value.</li> </ol> <p>Learning Goals:</p> <p>To equip students with the knowledge, skills, and confidence to effectively integrate AI into various career paths and interdisciplinary contexts.</p> <ul style="list-style-type: none"> <li>- Better understand AI principles and techniques</li> <li>- Better understand AI's impact on society and ethics</li> <li>- Better skilled at using AI tools and frameworks</li> <li>- Better skilled at independent research and exploration in AI</li> <li>- Better skilled at sharing knowledge and collaborating in teams</li> <li>- Better skilled at applying AI to real-world problems</li> <li>- Better skilled at project management and communication</li> <li>- Better skilled at working in interdisciplinary and diverse teams</li> <li>- Better skilled at producing tangible AI-driven outcomes</li> <li>- More adept at critical thinking and creative problem-solving in AI contexts</li> </ul> <p>Integration &amp; Interdisciplinary Approach:</p> <p>Both courses emphasize collaboration &amp; knowledge sharing, and are designed to be taken together. AI Discovery focuses on building a strong foundation &amp; fostering a community of learners exploring AI's potential. AI in Action takes this foundation into the real world, where students apply their skills to make a tangible impact. The interdisciplinary nature of the curriculum ensures that students from both technical &amp; liberal arts backgrounds can contribute meaningfully, leveraging their diverse skills &amp; perspectives.</p> <p>By the end of this curriculum, students will have not only a deep understanding of AI principles but also practical experience in applying AI to solve real-world problems. This prepares participants for careers in various fields that increasingly rely on AI technology, to drive innovation and/or sustainability.</p>
Course related to the instructor's practical experience (Summary of experience)	Commercial & Academic
Learning Goals	<ul style="list-style-type: none"> <li>- Understand the basic principles &amp; techniques of AI.</li> <li>- Develop proficiency in AI tools &amp; frameworks.</li> <li>- Foster independent research &amp; exploration in AI.</li> <li>- Create a collaborative environment for sharing AI knowledge &amp; co-creating discoveries.</li> </ul>

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/Flipped Classroom/Discussion, Debate/Group Work/Presentation/Workshop, Fieldwork			
More details/supplemental information on Active Learning Methods	As required			
Use of ICT	May require additional student subscription to a current AI model: typical prices are \$20/month			
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)
Feedback Methods	As required			

Grading Criteria		
Grading Methods	Grading Weights	Grading Content
In class participation	40%	
In class quizzes	30%	
Team Project	30%	

Required Textbook(s)	We will make our own reading materials/repository – the field is moving very quickly
Other Reading Materials/URL	As required
Plagiarism Policy	Heavy AI use
Other Additional Notes (Outline crucial policies and info not mentioned above)	None

(NOTE 2) Class schedule is subject to change

Class Schedule	
Class Number	Content
Class 1	Weeks 1-4: Foundations of AI - Introduction to AI & its history
Class 2	Weeks 1-4: Foundations of AI - Introduction to AI & its history
Class 3	Weeks 1-4: Foundations of AI - Machine learning basics (supervised, unsupervised, reinforcement learning) - Neural networks & deep learning
Class 4	Weeks 1-4: Foundations of AI - Machine learning basics (supervised, unsupervised, reinforcement learning) - Neural networks & deep learning
Class 5	Weeks 1-4: Foundations of AI - Natural language processing - LLM
Class 6	Weeks 1-4: Foundations of AI - Natural language processing - LLM
Class 7	Weeks 1-4: Foundations of AI - Ethical & societal implications of AI
Class 8	Weeks 1-4: Foundations of AI - Ethical & societal implications of AI
Class 9	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 10	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 11	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 12	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 13	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository

[illegible]

Class 28	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 29	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository
Class 30	Weeks 5-14: Student-Directed Discovery - Selection of group projects exploring AI applications - Weekly progress presentations - Peer feedback sessions - Compilation of findings into a class repository