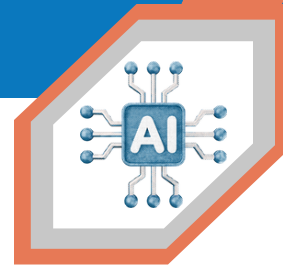


PATHWAY | AI/MACHINE LEARNING



PATHWAY DESCRIPTION

YEAR 1

An Introduction to Artificial Intelligence course equips high school students with future-ready skills aligned to workforce demands, STEM/CTE pathways, and equitable access to emerging technologies. Through applied, project-based learning, students develop the technical, ethical, and problem-solving competencies required in an AI-driven economy.

- **Workforce & Career Readiness:** Builds computational thinking, coding, and problem-solving skills aligned to high-growth sectors (healthcare, manufacturing, business), with connections to certifications, dual credit, and internships.
- **Ethical & Interdisciplinary Learning:** Integrates computer science, math, and social sciences while addressing bias, societal impact, and responsible AI use through real-world applications.
- **Equity & Access:** Ensures all students gain foundational AI literacy early, reducing opportunity gaps and positioning students as creators—not just consumers—of AI solutions.

YEAR 2

AI and Data Fundamentals introduces students to core database and data concepts through applied, hands-on learning. The course emphasizes how data is structured, managed, and used to drive decisions in modern organizations.

- **Database Foundations:** Types of databases, database environments, data modeling, table normalization, and use of ANSI Structured Query Language (SQL).
- **Applied Data Skills:** Hands-on development of tables, queries, reports, and basic applications.
- **Data & AI Concepts:** Introduction to data warehousing, data mining, data visualization, data analysis, and big data in business contexts.

YEAR 3

- Introduces core machine learning methodologies and how they are applied to real-world problems and industry use cases.
- Emphasizes ethical, human, and responsible AI practices across data collection, model training, and deployment.
- Explores Large Language Models (LLMs) and modern NLP, with hands-on insight into how AI language technologies are built and used in industry.

YEAR
1

5239 Principles of AI

- IDOE Course 5239, 2 Semesters

YEAR
2

7490 AI and Data Fundamentals

- IDOE Course 7490, 2 Semesters

YEAR
3

7494 AI/Machine Learning Capstone

- IDOE Course 7494, 2 Semesters

Students MUST complete all pathway classes with a 73% or better



CAREER OPTIONS

- Machine Learning Engineer
- AI Research Scientist
- Data Scientist
- AI Product Manager
- Robotics Engineer
- Natural Language Processing (NLP) Engineer
- Computer Vision Engineer
- AI Solutions Architect
- Business Intelligence Developer
- AI Ethics Specialist
- Deep Learning Engineer
- Automation Engineer
- & more!