



Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name: School District 22	School District/Independent School Authority Number (e.g. SD43, Authority #432):
Developed by: Deanna Fester	Date Developed: February 22, 2025
School Name: Clarence Fulton Secondary School	Principal's Name: Mike Edgar
Superintendent Approval Date (for School Districts only):	Superintendent Signature (for School Districts only):
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course Name: Artificial Intelligence Fundamentals	Grade Level of Course: 12
Number of Course Credits: 4 Credits	Number of Hours of Instruction: 120 Hours

Board/Authority Prerequisite(s):

- **No previous understanding required.**
- **Prior exposure to Computer Science, coding, or information technology is an asset but not mandatory.**

Special Training, Facilities or Equipment Required:

- **Access to internet-connected devices such as laptops or desktops.**
- **Classroom equipped with a projector or smartboard for demonstrations.**
- **Board Authorized list of AI Platforms and tools to use.**
- **Teachers should have a foundational knowledge of Artificial Intelligence concepts and ethical considerations, with optional professional development or training in educational technology.**

Course Synopsis:

- **Artificial Intelligence Fundamentals** is a course introducing the core concepts and tools of AI, while providing students an opportunity to think critically about the implications of using AI. Through hands-on projects, discussions, and collaborative learning, students will explore the definitions, history, ethical considerations, expand their digital literacy, research the future of AI, and explore specific AI tools. Emphasis will be placed on understanding how AI affects society, decision-making, and everyday life. Students will develop their soft skills including teamwork and communication, while responsibly using and evaluating AI Tools.

Goals and Rationale:

- This course is designed to prepare students for a future in which AI plays a central role in industries and communities. While fostering digital literacy, ethical reasoning, and problem-solving, students will gain a foundational understanding of AI's mechanisms. The course aims to empower learners to be informed participants in a tech-driven society and promotes responsible innovation, inquiry and growth.

Aboriginal Worldviews and Perspectives:

- This course will integrate Indigenous perspectives by fundamentally following the First People's Principles of Learning. Specific explorations include:

How AI development aligns or threatens Indigenous cultural protocols.

How machine learning can incorporate Indigenous languages and storytelling practices.

Guest speakers, land-based learning, and community consultation will be considered to ensure that Indigenous ways of knowing are respected in discussions about ethical technology use.

BIG IDEAS

Students will explore the fundamental concepts of AI including terms, definitions and history.	Students will examine the ethical considerations and societal impacts of AI.	Students will investigate how AI is integrated into everyday technologies.	Students will explore emerging trends and future innovations in AI.	Students will develop soft skills while working with AI tools.
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Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <ul style="list-style-type: none">• Design and implement algorithms to solve problems using AI techniques.• Evaluate the effectiveness of different AI models and approaches.• Communicate technical concepts related to AI clearly and effectively.• Critically assess the ethical implications of AI technologies.• Debate the societal impacts of AI, including privacy and job automation.• Develop guidelines for ethical AI use in various contexts.• Reflect on personal and societal values in relation to AI advancements.• Investigate the integration of AI in everyday technologies.• Analyze the user experience of AI-driven applications.• Create AI-driven solutions for real-world problems.• Evaluate the impact of AI on daily activities and social interactions.• Research emerging AI technologies and their potential applications.• Predict future trends in AI and their implications for society.• Present innovative AI projects and their potential benefits and challenges.• Analyze and interpret data to identify patterns and trends in AI applications.	<p><i>Students are expected to know the following:</i></p> <ol style="list-style-type: none">1. Fundamentals of AI: Introduction to the history of AI, and AI concepts, machine learning, neural networks, and natural language processing.2. AI Tools and Technologies: Overview of popular AI tools and platforms, such as TensorFlow, PyTorch, and AI APIs.3. Ethics in AI: Exploration of ethical issues, including educational ethics: cheating and plagiarism. Social-ethical implications: bias, cultural insensitivities, privacy, the impact of AI on employment, and global environmental impacts.4. AI in Workforce and Industry: Trends in the Case studies of AI applications in healthcare, finance, entertainment, and other sectors.5. Smart Technologies: Examination of AI in smart devices, virtual assistants, and social media algorithms.6. Future of AI: Discussion on emerging trends, innovations, and the future landscape of AI research and development.

Big Ideas – Elaborations

- Students will explore the fundamental concepts of AI including terms, definitions and history.
- Students will examine the ethical considerations and societal impacts of AI.
- Students will investigate how AI is integrated into everyday technologies.
- Students will explore emerging trends and future innovations in AI.
- Students will develop soft skills while working with AI tools.

Curricular Competencies – Elaborations

Create ethical conversations around AI use, including manipulations, deep fakes, AI hallucinations, environmental impacts, plagiarism

“Demonstrate proficiency in AI literacy: Develop the ability to critically evaluate how GAI can support or harm learning in formal educational settings. • Design inclusive learning environments: Understand how to design, select, implement, and evaluate educational media to achieve specific learning objectives. • Apply instructional design principles: Acquire the skills and knowledge to create multimedia learning resources for an educational setting that is meaningful to you. • Communicate persuasively: Reflect upon and articulate your philosophy of technology-enhanced instruction, drawing from the course concepts and personal experiences.” (MacDowell et al., 2024, p. 5)

Discuss responsible use of AI

Find the source of data

Understand the source of an algorithm.

How accurate is the information?

Ask Ai for text in a variety of voices

Use AI to create leveled text sets

Generate prompts and questions with AI to facilitate discussions

Create presentation slides with AI

Create review content, questions and activities with AI

Use AI to summarize texts

Content – Elaborations

- Define key terms of AI.
- Explore the timeline of AI development from the Turing Test to modern LLM's.
- Develop the skills of creating specific AI prompts.
- Identify real-world examples of AI applications.
- Compare the seven applications of AI.
- Analyze AI tools' roles in academic integrity and their appropriate use.
- Discuss frameworks of AI integration and their validity and application in education.
- Explore how underrepresented groups may be impacted or misrepresented in AI datasets.
- Investigate the carbon footprint of AI and explore solutions for sustainable AI.
- Evaluate how data is collected and used by AI systems.
- Discuss privacy concerns in popular applications (Siri, Alexa, TikTok).
- Explore how recommendation systems influence personal choice.
- Research career fields enhanced or threatened by AI (healthcare, customer service).
- Predict future trends in AI and assess their societal impact.
- Use tools like "Python" for hands-on exploration.
- Discuss the role of human-centered design in AI development.
- Invite Indigenous Elders to share their perspectives on how AI intersects with traditional ways of knowing.
- Study principles around Data Collection and Privacy.

Recommended Instructional Components:

- Hands on exploration
- Case studies and current events
- Project-based learning
- Cross-curricular connections
- Guest speaker and Elders
- Debates and Socratic seminars
- Collaborative research projects

Recommended Assessment Components: Ensure alignment with the [Principles of Quality Assessment](#)

- **Formative Assessments**
- **Performance-based assessments**
- **Reflective Journals**
- **Rubrics**
- **Peer and Self-Assessment**
- **Capstone project or presentation**

Learning Resources:

- **Online Platforms**
- **Readings**
- **Multimedia**
- **Curricular resources**

Additional Information:

- **This course is designed to complement BC's Applied, Design, Skills and Technologies (ADST)**
- **Opportunities for interdisciplinary collaboration with Science, Social Studies, and Indigenous Studies courses.**
- **Emphasizes ethical awareness, computational thinking, and career exploration in AI fields.**
- **Supports the development of digital literacy, critical media analysis, and 21st-century competencies.**