StudyForge
DIGITAL CURRICULUM

ADST: Introduction to AI

Type: Online

Module Description:

The big question for ADST: Introduction to AI is, “How can AI be used ethically as a tool that supports me in my academic journey?” This module seeks to give students a basic introduction to how artificial Intelligence (AI) works and its uses, while equipping them to make thoughtful and well-informed decisions about how they will use it, both now and in the future. The aim is that students will be able to:

- Recognize how generative AI works, and through this, understand ways that it is and is not helpful as an academic tool
- Understand how to use AI in ways that are ethical, useful, and supportive of their overall academic and personal development
- Have guided experiences in using AI that will help them use it effectively throughout their academic and future careers
- Recognize the role of stewardship in using technology responsibly

This module covers one-third of either ADST 8 or ADST 9. Not all Curricular Competencies or Content are covered.

Major Units and Topics:

- How AI Works
- Using AI Honestly and Intelligently
- The Design Process and AI

Assessment Requirements:

- AI Reflection Questions
- Practicing Prompts
- AI and Academic Integrity
- Reflection Questions
- AI Research Assistant
- Design With AI Project

- Each lesson is designed to take approximately 40-50 minutes, with the exception of major projects and assignments

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Learning Standards Overview, ADST 8:

	Unit 1: How AI Works	Unit 2: Using AI Honestly and Intelligently	Unit 3: The Design Process and AI
Curricular Competency Learning Standards			
Students are expected to be able to do the following:			
Applied Design			
Understanding context			
• Empathize with potential users to find issues and uncover needs and potential design opportunities			✓
Defining			
• Choose a design opportunity			✓
• Identify key features or potential users and their requirements			✓
• Identify criteria for success and any constraints			✓
Ideating			
• Generate potential ideas and add to others' ideas			✓

• Screen ideas against criteria and constraints			✓
• Evaluate personal, social, and environmental impacts and ethical considerations			
• Choose an idea to pursue			✓
Prototyping			
• Identify and use sources of information			
• Develop a plan that identifies key stages and resources			✓
• Explore and test a variety of materials for effective use			
• Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed			✓
• Record iterations of prototyping			✓
Testing			
• Test the first version of the product or the prototype			✓
• Gather peer and/or user and/or expert feedback and inspiration			
• Make changes, troubleshoot, and test again			✓
Making			

• Identify and use appropriate tools, technologies, and materials for production			✓
• Make a plan for production that includes key stages, and carry it out, making changes as needed			✓
• Use materials in ways that minimize waste			
Sharing			
• Decide on how and with whom to share their product			✓
• Demonstrate their product and describe their process, using appropriate terminology and providing reasons for their selected solution and modifications			✓
• Evaluate their product against their criteria and explain how it contributes to the individual, family, community, and/or environment			✓
• Reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space			
• Identify new design issues			
Applied Skills			
• Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments	✓	✓	✓

• Identify and evaluate the skills and skill levels needed, individually or as a group, in relation to a specific task, and develop them as needed	✓	✓	✓
Applied Technologies			
• Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task	✓	✓	✓
• Identify the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use	✓	✓	
• Identify how the land, natural resources, and culture influence the development and use of tools and technologies	✓	✓	

	Unit 1: How AI Works	Unit 2: Using AI Honestly and Intelligently	Unit 3: The Design Process and AI
Content Learning Standards			
Students are expected to know the following:			
Digital Literacy			
• Elements of digital citizenship		✓	
• Ethical and legal implications of current and future technologies	✓	✓	✓

• Strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow	✓	✓	
• Search techniques, how search results are selected and ranked, and criteria for evaluating search results	✓	✓	
• Strategies to engage with personal learning networks			✓

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Learning Standards Overview, ADST 9:

	Unit 1: How AI Works	Unit 2: Using AI Honestly and Intelligently	Unit 3: The Design Process and AI
Curricular Competency Learning Standards			
Students are expected to be able to do the following:			
Applied Design			
Understanding Context			
• Engage in a period of research and empathetic observation in order to understand design opportunities			✓
Defining			
• Choose a design opportunity			✓
• Identify potential users and relevant contextual factors			✓
• Identify criteria for success, intended impact, and any constraints			✓
Ideating			
• Take creative risks in generating ideas and add to others' ideas in ways that enhance them			✓
• Screen ideas against criteria and constraints			✓
• Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures			
• Choose an idea to pursue, keeping other potentially viable ideas open			✓
Prototyping			
• Identify and use sources of inspiration and information			
• Choose a form for prototyping and develop a plan that includes key stages and resources			✓

• Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability			
• Prototype, making changes to tools, materials, and procedures as needed			✓
• Record iterations of prototyping			✓
Testing			
• Identify sources of feedback			
• Develop an appropriate test of the prototype			✓
• Conduct the test, collect and compile data, evaluate data, and decide on changes			✓
• Iterate the prototype or abandon the design idea			✓
Making			
• Identify and use appropriate tools, technologies, materials, and processes for production			✓
• Make a step-by-step plan for production and carry it out, making changes as needed			✓
• Use materials in ways that minimize waste			
Sharing			
• Decide on how and with whom to share their product			✓
• Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology			✓
• Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment			✓
• Critically reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space			
• Identify new design issues			
Applied Skills			
• Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments	✓	✓	✓
• Identify the skills and skill levels needed, individually or as a group, in relation to specific projects, and develop and refine them as needed	✓	✓	✓

Applied Technologies			
• Choose, adapt, and if necessary learn about appropriate tools and technologies to use for tasks	✓	✓	✓
• Evaluate the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use	✓	✓	
• Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies	✓	✓	

	Unit 1: How AI Works	Unit 2: Using AI Honestly and Intelligently	Unit 3: The Design Process and AI
Content Learning Standards			
Students are expected to know the following:			
Information and Communications Technologies			
• text-based coding			
• binary representation of various data types, including text, sound, pictures, video			
• drag-and-drop mobile development			
• programming modular components			
• development and collaboration in a cloud-based environment			
• design and function of networking hardware and topology, including wired and wireless network router types, switches, hubs, wireless transfer systems, and client-server relationships			
• functions of operating systems, including mobile, open source, and proprietary systems			
• current and future impacts of evolving web standards and cloud-based technologies			

• design for the web			
• strategies for curating and managing personal digital content, including management, personalization, organization, maintenance, contribution, creation, and publishing of digital content	✓	✓	
• relationships between technology and social change	✓	✓	
• strategies to manage and maintain personal learning networks, including content consumption and creation	✓	✓	
• keyboarding techniques			