HAWKES LEARNING

AI Literacy for College Students

Thinking Critically, Ethically, and Creatively with AI

Module 5:
AI for Learning and Academic Work

Used thoughtfully, AI can support learning and academic success, but it should complement, not replace, the critical thinking, practice, and understanding that education is designed to develop. Responsible use means verifying outputs, applying your own reasoning, and reflecting on how AI fits into the learning process.

Responsible Use Examples across Disciplines

- **Humanities:** identify themes in a text, synthesize ideas from multiple sources, brainstorm essay topics, outline arguments
- **STEM (science, technology, engineering, mathematics):** work through a math or coding problem step by step, check formulas, explore alternative approaches, analyze data sets
- **Social Sciences:** map arguments or findings in readings, summarize and combine research studies, organize experimental or survey results
- **Creative Arts and Design:** draft storyboards or sketches, test different design options or versions of a project, generate ideas for creative projects, media, or experiments
- **General Academic Support:** create study guides, generate practice questions, organize notes, or locate credible sources for a research project

Why Appropriate Use Matters for Your Future

AI can feel like a tempting shortcut, but asking AI to do your work for you means **you miss the learning you're paying for**. College is designed to help you build knowledge, judgment, and skills you'll need in your field. Relying on AI to replace that work can leave you unprepared and lead to harmful outcomes in real life.

Real-World Examples:

- **Medical:** A person followed AI medical advice, replacing table salt with sodium bromide, and was hospitalized. (hawkes.biz/medicalAI)
- **Legal:** A lawyer was fined for citing fabricated case information from an AI tool in court pleadings. (hawkes.biz/legalAI)
- **Misinformation:** AI-generated images, videos, and voice recordings (deepfakes) have been used to spread false information during elections and news events, leading to public confusion, voter misinformation, and reduced trust in media. (hawkes.biz/misinformationAI)

These examples show that AI output may sound convincing but can be inaccurate, incomplete, or misleading. Learning how to use AI responsibly in college helps you develop the knowledge and judgment needed to evaluate AI-generated information and make informed decisions in academic, professional, and everyday contexts.

Using AI for Learning: "AI Can Help You Must Do This Yourself"

Discipline / Assignment	Steps AI Can Help With	Steps You Must Do Yourself
Math / STEM	Break complex problem into smaller steps, check calculations, explain formulas, request more sample problems to solve	Solve the problem, interpret results, replicate the problem without help from AI
English / Humanities	Summarize sources, brainstorm essay topics, outline drafts	Develop the thesis, analyze the evidence, write the final essay
Social Sciences	Organize survey results, map arguments, synthesize literature	Draw conclusions, apply theory, write an analysis

Example: Using AI Responsibly for Learning

Scenario: You have a challenging math problem: *Solve for x in* $3x^2 + 5x - 2 = 0$.

Correct use of AI:

- Ask AI to help you work through the problem one step at a time. It's about the process, not just getting the answer.
- You follow along, check your work, and make decisions yourself.

Example prompt: "Help me factor this quadratic equation step by step, and explain each step so I can understand it."

Why it works:

- You learn and understand the method.
- You can solve similar problems independently on homework, quizzes, or exams.

Incorrect use of AI:

- Ask AI to **solve the entire problem and give the answer** without showing steps.

Example prompt: "Solve $3x^2 + 5x - 2 = 0$ and give me the answer."

Consequences:

- You don't understand the process.
- You won't be able to solve similar problems on your own.
- You risk failing quizzes or assignments that test the same skills.

Try It

1. Pick a recent or upcoming assignment in any discipline.
2. Identify **one step AI could help with** (like checking a step, summarizing a source, or outlining a paragraph).
3. Identify **one step you must do yourself** (like solving the problem, analyzing evidence, or writing the final essay).
4. Reflect: What would happen if you skipped the "must do yourself" step? How does responsible AI use help you actually learn?