AI in education at AGNR

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AI and learning in AGNR

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We know it’s inevitable so what’s stopping us?

- Concerns that students aren’t learning and/or aren’t doing the work
- Inability to sort and identify good information
- Change from what we’ve done
- Poor understanding about how best to incorporate into curriculum

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New AGNR course
Fall 2026

New AGNR course (for all majors)

- Introduces students to the core concepts and practical realities of AI within these fields
- Blends theory, case studies, and expert seminars to examine how AI models (from Large Language Models to computer vision) function
- Students will critically evaluate real-world applications, such as precision farming, environmental impact modeling, and veterinary diagnostics
- Challenges students to consider both the benefits and drawbacks of this rapidly expanding set of technological tools

New AGNR course

- Learning outcome: Possess foundational literacy to navigate the AI landscape and make informed decisions about integrating these tools into their education and future careers
- **The big question:** What is the role of artificial intelligence tools in teaching, research, and work related to food systems and environmental conservation?

New AGNR course

- Answer the central question of this course for themselves, “What are the best applications of various artificial intelligence tools in sustainable food systems, environmental sciences, agricultural economics, and animal health?”
- Describe what Artificial Intelligence is and what it is not, and its applications in sustainable food systems, environmental sciences, agricultural economics, and veterinary medicine.
- Define and apply the basic terms, concepts, and approaches that researchers and industry professionals use to integrate artificial intelligence technologies into their work.

New AGNR course

- Suggest appropriate types of AI tools and their uses, benefits, and limitations in different disciplines and use cases.
- Select, critically evaluate, and employ resources for learning about AI tools (uses, limitations, benefits, and drawbacks).
- Describe the effects of AI adoption on ecosystems, the workforce, intellectual property production and protection, and student learning and propose possible solutions to one or more of these challenges.
- Communicate how artificial intelligence is shaping their futures, including the production of the food they consume, the research about and conservation of the ecosystems we all share, their own learning, and our shared future.
- Create and communicate a plan for learning more about artificial intelligence in their personal lives and intended careers.

Building capacity

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UMD leads in AI and quantum

- Artificial Intelligence Interdisciplinary Institute at Maryland (AIM) launched in April 2024
- A collaborative hub for AI, supporting faculty research, offering innovative and experiential learning opportunities, and focused on responsible and ethical AI technology
- Leverages expertise of 100+ faculty who teach and study AI

AGNR AI cluster hire

- Ongoing – posted spring 2026
- >150 applications across 5 departments
  - Animal and Avian Sciences, Environmental Science and Technology, Nutrition and Food Science, Plant Science and Landscape Architecture, Veterinary Medicine
- Goal of hiring 3 to 5 assistant professors that work across disciplines as a cohort and work with AIM
- In person interviews over the summer

We reimagine learning

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AI as part of an improved student experience

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Rethinking the student experience

- We hear employer needs for strong communication and problem-solving skills
- We recognize student desire for more applied and hands-on experiences
- We know that challenges faced by the next generations are increasingly complex and require many disciplines working together to solve
- We are committed to training students not for their first job but for their entire career

A novel approach to learning

- What if we leaned into AI and used it to impart knowledge, replacing the lecture environment for courses of all sizes?
  - Risks, Benefits, Rewards?
- What if we spent more ‘class time’ applying knowledge than delivering knowledge?
- What if we applied knowledge to complex problems and did so by having students from different majors work together?

- Would we better achieve our objective of meeting student and employer goals without compromising student learning?

What’s holding us back

- Need to approach it in a way that doesn’t add work but displaces it
- Need to phase it in and consider how transfer students assimilate without adding time to the program
- Change is uncomfortable, especially when there’s no guarantee
- We haven’t all heard from students and employers what they want
- There isn’t a firm incentive to change
- Concerns about AI-readiness

- Your thoughts are welcome!


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