

Custom AI Bots in the School of Health and Natural Sciences

As part of the School of Health and Natural Sciences' efforts to thoughtfully integrate artificial intelligence into teaching and learning, two custom AI bots were developed using BoodleBox for use in two different courses. Rather than using AI as a general-purpose tool, the bots were intentionally designed around specific course goals, assigned textbooks, syllabi, and learning activities. This approach provided students with targeted AI support while maintaining instructor oversight and keeping students connected to the established course materials.

1. Anatomy Assistant Bot –HLSC 285 Musculoskeletal Course

Purpose:

This bot was designed to function as a course-specific teaching assistant for the Musculoskeletal course. The primary goal was to help students engage with course content, prepare for class, and develop the ability to locate and use information from the assigned textbook.

Importantly, the bot was not designed to give students direct answers. Instead, when students asked questions, the bot guided them to the appropriate textbook pages and course resources where they could locate and explore the information themselves. The bot was configured within the parameters of the assigned textbook, allowing students to engage more deeply with relevant course content.

Deployment:

The bot was deployed as a pre-reading/class preparation activity. Students received access to the bot and were encouraged to ask questions about the assigned topic before coming to class. Students could ask multiple questions and use the interaction to identify areas they understood as well as concepts requiring additional clarification.

The instructor could subsequently review the student conversation threads, providing an additional window into student thinking and areas of difficulty. These interactions could therefore be used as a form of formative assessment, helping the instructor identify misconceptions and determine where additional classroom support was needed.

Benefits to Students and Faculty:

- Provided students with an accessible, course-specific learning resource.
- Encouraged students to engage with the textbook before class.
- Guided students toward source material rather than simply providing answers.
- Supported independent learning and question generation.
- Allowed students to ask multiple questions in a low-pressure environment.
- Helped students identify areas where they needed additional support.

- Gave faculty insight into student questions, misconceptions, and learning needs.
- Strengthened the connection between AI use and the assigned course materials, rather than encouraging students to rely on generalized AI responses.

2. Health Policy Analysis Bot- Health Policy Course

Purpose:

This bot was designed to support students in a Health Policy course as they analyzed health policy issues and developed projects addressing real-world health concerns. The bot provided students with an AI-supported environment in which they could explore policy questions, examine issues they identified, collect local information, and consider potential solutions.

Unlike a general AI chatbot, the Health Policy Analysis bot was designed around the course syllabus and assigned textbook, creating a more focused learning environment aligned with the course objectives.

Deployment:

Students were provided with a direct link to the custom bot within the BoodleBox platform and used it as part of a specific course assignment/project. Students could interact with the bot as they explored health policy issues, analyzed their selected topics, examined local data, and considered possible responses or solutions.

The bot therefore functioned as a guided project-support resource, helping students move from identifying a health policy problem toward investigating the issue and thinking critically about potential solutions.

Benefits to Students and Faculty:

- Connected AI use directly to a specific course assignment.
- Supported students in applying health policy concepts to real-world issues.
- Encouraged exploration of local data and community health concerns.
- Supported problem-solving and solution development.
- Kept students working within the context of the assigned syllabus and textbook.
- Provided an additional layer of academic support without replacing the instructor.
- Allowed faculty to maintain greater oversight of how students were using AI.
- Created opportunities for students to engage with course concepts through questions and exploration rather than simply receiving generated answers.

Key Takeaway

The experience with two bots demonstrates that effective educational AI integration does not necessarily require students to use AI broadly or independently. AI can be deliberately bounded, course-specific, and pedagogically purposeful.

The two bots illustrate how AI can be used to:

Guide students rather than give them answers, connect students to course resources rather than replace them, provide faculty with insight into student thinking, and create additional opportunities for meaningful student–faculty engagement.

This approach positions AI as a learning partner within the instructional design, while preserving instructor expertise, academic expectations, and the central role of the course curriculum.