

Instant Feedback, Lower Anxiety: How AI Study Agents Support Student Learning in Math Courses

Learning Circle • University of Miami Faculty Showcase

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MTH 108 Fall 2025 Study Agent

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A dedicated study assistant for Dr. Gorzycka-Sikora's Precalculus course at the University of Miami. Supports trigonometry topics using the official textbook, syllabus, and exam reviews

Scope of Work

This project explores the impact of AI-powered study agents deployed in undergraduate math courses (MTH 108, MTH 151, MTH 162) at the University of Miami. The agents provide 24/7 course-specific support—answering questions, explaining concepts, and clarifying policies—to supplement instructor availability.

Data from MTH 108 Summer 2025

In MTH 108 (Summer 2025), 85 % of students agreed the agent helped them understand course material, and 57 % reported increased confidence preparing for exams. Most used the agent for exam preparation (64 %) and homework (64 %), aligning with their main stress areas.

“the agent was available 24/7 and could answer and explain the smallest questions”

“quick response for questions about course policy or exam content”

Weekly Email Volume

The chart compares the average number of weekly emails per 100 students between Spring 2025 and Fall 2025 (Weeks 1–8). The Fall semester, during which the study agents were deployed, shows a visible decrease in instructor email volume, suggesting that students turned to the AI agent instead of email for quick answers

