

About Frameworks for Mathematics and Collegiate Learning

Frameworks for Mathematics and Collegiate Learning is a semester-long course designed to help students develop productive persistence and acquire the strategies necessary to succeed in college coursework (particularly, mathematics coursework) and in their future careers.

Frameworks draws on learning theory to support students' development of the mindsets, skills, and behaviors necessary for college success, including study strategies and time management. The curriculum also includes a focus on meeting and working with campus resources.

Course structure and contact hours

Frameworks is a college-level course designed to be taught as a one-semester course with 3 student-contact hours per week or in a quarter system with an equivalent number of contact hours.

Learning goals

The *Frameworks* course is built on four main content strands, each of which is supported by broad learning outcomes. These four strands are woven throughout the course to create a coherent curriculum.

Build community and connect to campus resources.

Make personal connections with peers, instructors, and other campus support personnel.

- Students actively participate as members of identifiable teams throughout the term, and visit with instructors and campus resource center personnel.

Locate and use support center services.

- Students identify and take advantage of support services on campus, including academic advising, career counseling, financial aid services, libraries, disability services, and tutoring services.

Develop and maintain motivation for college success.

Develop and pursue useful goals.

- Students set, monitor, and adjust long-term personal, professional, academic, and social goals.

Apply strategies to maintain motivation.

- Students maintain their motivation by focusing on controllable academic behaviors and using strategies to monitor and manage their attitudes, emotions, and thoughts when facing challenging tasks or academic setbacks.

Develop a process for replacing negative, self-defeating habits with positive habits.

- Students identify habits and beliefs that have interfered with their success and learn to apply metacognitive awareness to plan, monitor, evaluate, and reflect on their learning and to seek and use feedback to improve performance.

Develop and use study strategies and skills.

Employ critical thinking skills when approaching challenging tasks.

- Students formulate questions, hypothesize and test hypotheses, draw inferences, interpret evidence, formulate conclusions, evaluate accuracy and credibility of evidence, and identify diverse approaches to issues.

Demonstrate organization and management of time and study materials.

- Students create and maintain a distributed study schedule and employ time-management strategies.

Describe how to store and retrieve information from memory.

- Students investigate factors that influence memory as well as specific information-processing and organizing strategies.

Demonstrate effective reading and note-taking strategies that enhance retention and comprehension.

- Students learn and apply strategies for identifying key concepts in lectures and readings, organizing class notes, and increasing reading comprehension.

Identify and apply effective strategies to use before, during, and after taking an exam.

- Students develop strategies for preparing for exams, taking exams, and reviewing performance.

Demonstrate written and oral communication that is appropriate to context and that effectively conveys meaning and logic.

- Students develop written and oral arguments that are insightful, purposefully organized, logically supported, audience appropriate, and effectively delivered.

Use technology throughout the course.

- Students use college email to communicate, software to complete assignments, and a technology platform (such as Blackboard) to submit assignments.

Find direction in college.

Identify future college and career pathways.

- Students explore the characteristics and required skills of various career paths and consult with advisors and instructors to determine an appropriate path to follow.