

# Mack Adapt

## User Manual

Adaptive Quizzing System for Learning Objectives

The logo consists of a large, bold, black 'G' followed by a smaller, bold, black 'M'. The 'G' has a superscript '2' positioned above its top-left curve.

**G<sup>2</sup>M**

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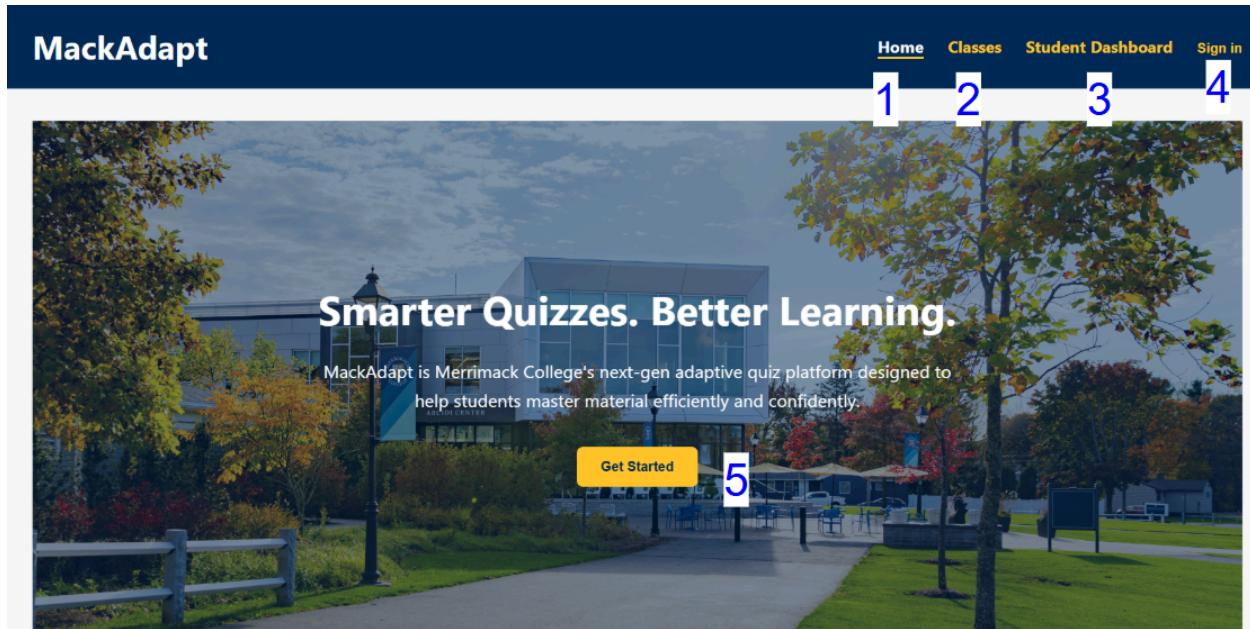
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## **Executive Summary**

MackAdapt is a platform that is geared towards each student's personal learning objectives. It allows professors to create classrooms and enroll their students, with the option of removing students or classrooms at any time. Inside each classroom, a professor has the opportunity to add a reading to the class agenda and specify objectives that they believe are useful for students to focus on. Once they have uploaded the assigned reading for the quiz, they can create a quiz with questions that are each tagged with a learning objective from the reading. A student enrolled in a classroom does not have the privileges of creating quizzes, adding readings, or managing enrollees. However, they will have access to a sidebar that displays their classmate's names and student email addresses for efficient communication as well as any readings that the instructor has uploaded. By clicking on a reading, the student can see the objectives that they should focus on. When a student clicks on a quiz they must choose an objective to focus on before any questions appear. Once they choose an objective such as "Derivatives" for their Calculus quiz, all questions that appear will be specifically tagged with that objective, creating a personalized space for them to practice the chosen objective. An important feature that Dr. Stroud requested was immediate feedback after each question, rather than a student receiving their score at the end of the quiz. The questions may also adjust to a student's difficulty level depending on how they are scoring after each question. When a student finally submits their quiz, the professor will receive an email with a csv file of the

student's results. The student may also view their analytics and any badges they have earned under their student dashboard.

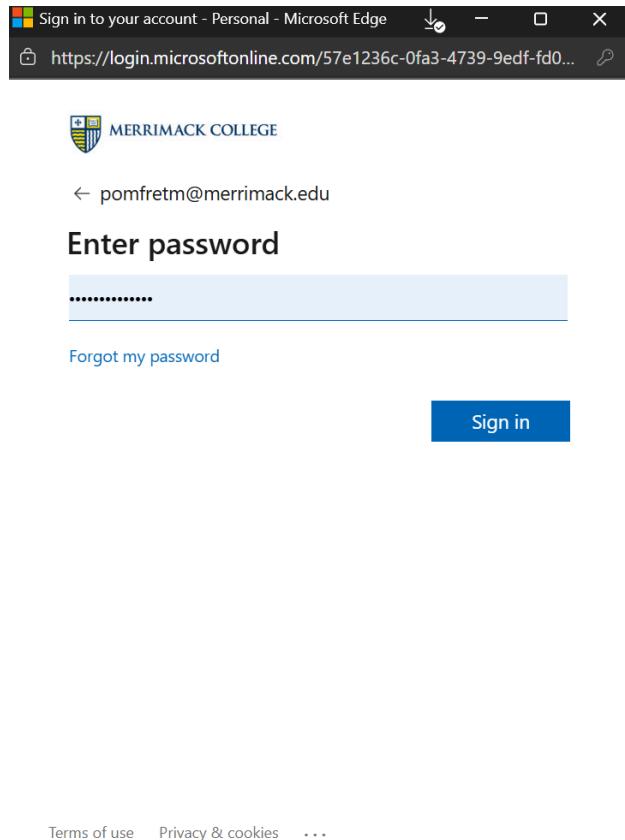
## Home & Navigation Bar



- 1.) Takes you back to MackAdapt's Home page
- 2.) Takes you to view all of your classes
- 3.) Takes you to your student dashboard
- 4.) Allows you to sign in with Google OAuth
- 5.) Allows you to create an account with your Merrimack email

## Sign In

Upon navigating to the login page, the user will be prompted to enter their Merrimack email and password to be authenticated. Students and instructors must sign in to access features of the app.



## Instructor Manual

- Classes Page

Your Classes

+ Create New Class 1

European History 2  
[Go to Class](#)

Computer Science I  
[Go to Class](#)

A screenshot of a web page titled "Your Classes". It features a dark blue header with the title and a "Create New Class" button. Below the header, there are two class entries. Each entry consists of a yellow vertical bar on the left, the class name in bold, the number of students in blue, and a "Go to Class" link. The first class is "European History" with 2 students. The second class is "Computer Science I".

- 1.) Clicking “Create Class” will create a popup where you can add the class name and manage enrollees.
- 2.) Clicking “Go To Class” will lead you to the classroom where you can find enrolled students, manage classroom information, and enrollees

- Class Creation Page

The screenshot shows a 'Create New Class' dialog box with the following fields and buttons:

- Class Name** 1: An input field containing "Enter class name".
- Professor Name** 2: An input field containing "Dr. John Kennedy".
- Professor Email** 3: An input field containing "kennedyj@merrimack.edu".
- Manage Enrollees** 3: A yellow button.
- Cancel** 4: A grey button.
- Create** 5: A dark blue button.

- 1.) Enter the name of your new class
- 2.) Instructor details will be autofilled. However, if they do show up blank, please fill in your desired title and email
- 3.) Clicking “Manage Enrollees” will take you to the page where you can add or remove enrollees in your class
- 4.) By clicking “Cancel” any details you have added to the fields will not be included and you will cancel the creation of your new class
- 5.) The create button publish your class and allow you to create quizzes, manage your students, and add any readings you desire

- Class Module Page

The screenshot shows the MackAdapt interface. At the top, there's a dark header bar with the 'MackAdapt' logo and navigation links for 'Home', 'Classes' (which is underlined), 'Student Dashboard', and 'Sign in'. Below the header, the main content area has a light gray background. On the left, there's a sidebar with a yellow vertical bar on the left. The sidebar contains the following elements:

- A large blue number '5' at the top right.
- 'Calculus 3' in bold black text.
- Three small buttons: 'Add Reading' (blue), 'Manage Enrollees' (light gray), and 'Create Quiz' (blue).
- A yellow box containing 'Intro to Derivatives' and a blue number '1' below it.
- A link 'Go to Quiz'.

On the right side of the main content area, there's a sidebar with a white background and a thin gray border. It contains the following information:

- 'Class Enrollees' with two items:
  - David Wilson (wilsond@merrimack.edu)
  - Abraham Lincoln (lincolna@merrimack.edu)
- 'Class Readings' with one item:
  - Derivatives

- 1.) This shows all of the quizzes that you have created in a class module. By clicking “Go to Quiz”, you are able to get a student view of the quiz to make sure it behaves like you imagined. However, your score will not be saved.
- 2.) This button creates a popup where you can link a reading to your class module. This allows a new reading to be shown in the sidebar and objectives to be added.
- 3.) This button takes you to a separate page where you can manage your class enrollees. Keep in mind that this only applies to the classroom where you entered that page from.
- 4.) This button allows you to create a new quiz on a separate page. Because of the objectives, the quiz creation is slightly more unique than what you’re familiar with.
- 5.) This sidebar simply displays your students and their contact information for quick communication. You can also keep track of all the class readings here.

- Add Reading

Add Reading

Reading Name: 1

About Isaac Newton

Objective: 2

History

Objective:

Gravity

Objective:

Derivatives

Objective:

Integrals

3

Add Objective

Cancel Save Reading

- 1.) Insert the name of the reading. It is best to keep these names straightforward or something that your students will recognize. Keep in mind that the actual reading materials will not be added, so students are responsible for doing their assigned readings on Canvas or Google Classroom.
- 2.) Add any objectives that you plan to use in upcoming quizzes. It is best to be specific with these so your students can have a more personalized experience
- 3.) By clicking “Add Objective”, more objective fields are added. Add as many objectives as you think your students deserve.

- Manage Enrollees

### Enroll Students

Search by email to add a student to this class. Demo-only; uses mock data for now.

 x 1 Add

#### Search Results

##### Student #1

burnetta@merrimack.edu

Major: Computer Science

2

Add

#### Enrolled Students

##### Student #7

wilsond@merrimack.edu

3

Remove

##### Student #9

lincolna@merrimack.edu

Remove

- 1.) This “Add” button adds an email if it is typed in full. If the email is only partially typed the student will not be added
- 2.) This area is for search results. Chances are, the student you want will come up by the time you finish typing the first part of their email, so this is a quick way to add students without the hassle of remembering emails.
- 3.) This section is to remove any enrollees who may have dropped the class.

- Create Quiz

- 1.) Add quiz name
- 2.) Select a reading from the dropdown menu under “link a reading”
- 3.) Click “Attach Reading”

## Create Quiz

Quick Links: [Back to Classes](#)

### Quiz Details

Quiz Name

Intro to Derivatives

### Link a Reading

Select Reading

Derivatives

Attach Reading

## Question 1 1

### Question Text

Difficulty

2

Learning Objective

Velocity

3

A)

4

B)

C)

D)

Correct Answer (A/B/C/D)

A/B/C/D

Add Question

Save Quiz

5

1.) Add the Question text

2.) Select difficulty from the dropdown menu

Difficulty

Easy

Easy

Medium

Hard

3.) Select the learning objective from the dropdown menu. These will be autofilled based on the reading that you attached at the beginning

Learning Objective

Velocity

Velocity

Notation

Graphs

Newton

Integrals

4.) Type the possible choices into fields A-D and specify the correct choice under “Correct Choice Label”

5.) Click “Save Quiz” if you are finished or “Add Question” if you would like to add another question

- **Get Quiz Results**

After each quiz attempt, a professor will be emailed each student's results in CSV format. Below is an example of what this may look like.

```
studentId,quizId,questionId,questionText,chosenAnswer,correctAnswer,isCorrect
```

```
12345,10,20,"What is the width of a  
circle","C","C",TRUE  
12345,10,21,"What is half the width of a  
circle","A","A",TRUE  
12345,10,22,"What is the perimeter of a circle  
called","B","A",FALSE
```

## **Student Manual**

- **Classes Page**

The screenshot shows a user interface for a student's classes. At the top, the title "Your Classes" is displayed in a large, bold, dark blue font. Below the title, there are two class entries, each enclosed in a rounded rectangular box with a yellow vertical bar on the left side. The first entry is "European History" with a "Go to Class" link below it. The second entry is "Computer Science I" with a "Go to Class" link below it.

Class	Action
European History	<a href="#">Go to Class</a>
Computer Science I	<a href="#">Go to Class</a>

By clicking “Go to Class”, you can enter the specific [class module](#) that you desire.

- **Class Module**

The screenshot shows the MackAdapt student dashboard. At the top, there's a dark blue header with the "MackAdapt" logo and navigation links: "Home", "Classes" (which is underlined), "Student Dashboard", and "Sign in". Below the header, the main content area has a light gray background. It features a section titled "European History" with two items: "Fall Of Prussia" and "Quiz #8", each with a "Go to Quiz" link. To the right, a sidebar has a dark blue header with the title "Class Enrollees" and the number "2". It lists two students: John Kennedy (kennedyj@merrimack.edu) and Alyssa Olona (olonaa@merrimack.edu). Below this, it says "Class Readings" and lists "Prussian History".

- 1.) In this area, you can see all the quizzes that are available to you. For some, this might not be such a happy sight. When you've completed your assigned readings (which one can find a reference to under section #2), click "Go to Quiz" to begin your quiz.
- 2.) In this sidebar, you are able to see a list of your classmates as well as their emails so you can collaborate with other students in the class. You will also see the relevant readings that the available quiz will focus on. This is helpful to know which readings on Canvas or Google Classroom you need to catch up on.

- **Take Quiz**

## Choose an Objective to Focus On

- Emperors
- Military
- Politics
- Geography

[Begin Quiz](#)

**1**

## Loading question... **2**

[Submit & Next](#)

- 1.) This section displays all of the objectives that are included in the quiz and allows the student to choose one. Once they click “Begin Quiz”, questions will load one by one (seen in the figures below) that are personalized to the chosen objective.
- 2.) This question section will not load until you choose an objective from step 1. Without choosing an objective, you will not get the personalized algorithm MackAdapt is designed for.

## Question 1

- Choice: A
- Choice B
- Choice C
- Choice D

**Submit & Next**

When you choose an answer, you must click “Submit & Next” to get feedback and move to the next question. Immediate feedback is said to be the most effective for students taking a quiz, so you will see the feedback displayed below after answering each question. The green highlight shows the correct answer, and the red highlight shows the incorrect answer.

## Question 1

- Choice: A
- Choice B
- Choice C
- Choice D

**Submit & Next**

While students respond best to immediate feedback, MackAdapt still keeps track of their overall score. When a student answers the last question, they will receive the popup below.

## Quiz Complete

You scored 0%.

[Return to Dashboard](#) [Back to Class](#)

- [Student Dashboard](#)

This area is responsible for students seeing their scores. You can navigate to this by clicking “Student Dashboard” in the top navigation bar. Here you can see your highest score, average score, streak, and any badges you have earned. If you are an instructor, these fields will be left blank.

The screenshot shows the Student Dashboard interface. At the top, it says "Student Dashboard" and "Welcome back, Gio — track scores, streaks, and goals." It includes a dropdown for "PSYC 101 — Intro Psychology" and a search bar. On the right, there's a "Start New Quiz" button. The dashboard features four main cards: "High Score" (100%), "Average Quiz" (85%), "Streak" (3 quizzes), and "Objectives to Improve". The "Objectives to Improve" card lists "Learning Theories • 2", "Experimental Design • 2", "Memory & Recall • 1", and "Statistics Basics • 1".

Quizzes Tests

ID	Date	Score	Objectives
q-1005	2025-10-01	100%	
q-1003	2025-09-17	90%	Experimental Design
q-1002	2025-09-10	80%	Learning Theories
q-1001	2025-09-03	70%	Memory & Recall Learning Theories