

Mastery Learning App

You will need to name your course. In this example we will be calling it 'Discrete Math'

About Stats Profile (ellatuson@brandeis.edu) Logout

# Create a Course

Enter a new course name, starting and ending dates, and the type of assessment you want this app to support.

Course Name

starting date: 2025-02-20 ending date: 2025-06-20

The start and end dates default to a four month period, but can be changed.

## Type of Course

### **Proctored Skill-based Paper Exams**

- O Exam Generation and Grade Reporting (MLA0) You will give exams in class and grade them yourself. Each exam question will test a particular skill or concept. You will grade the exams and upload the grades to the app. with a 1 for a correct answer and a 0 for an incorrect answer The app will calculate the student's grade and report it to you and to the students. The app will give you allow you to import skills from a "Master Course" and let you generate exams for selected sets of skills using a large library of skillbased problems. We currently have master courses for PreCalculus, Differential Calculus, and Integral Calculus.
- O Exam Generation, Grade Reporting, and Exam Grading (MLA1) In addition to generating exams, the app will provide an interface to allow students to upload photos of their exams to the app, and an interface for graders to grade the exams with binary grading; and for students to see the feedback the graders have provided.

#### Online Peer Review Assessment

Online in-class questions (PRA) The app will allow you to create questions on the fly (or in advance) using markdown (or plain text) and display them to the students in class. The students will be able to answer the questions using the app and to anonymously peer grade the answers of their classmates. The grading is by "Good Faith Effort" and the students will be able to see the answers and the grades of their classmates after the grading is done.

In this example, we will be creating a MLA0 course for generating and managing in-person paper exams.

If you would like to have online submissions for exams, you can create a MLA1 course.

For administering homework or in-class participation questions, we recommend PRA courses.

## **Future Course Types** These have not yet been enabled.... Online Skill-based Assessment

Online Assessment (SGA) The app will allow you to create questions on the fly (or Each question will test a particular skill or concept. The students will be able to answ

I am not a robot I am a robot

Create the new course

Select I am not a Robot (unless you are a robot) and then click on the Create a new course button

e students in class. e answers using the

Select a name which will easily identify your course. For example: give the Course ID, section, and semester, e.g. COSI10a-02 Spr20 The course name will only be visible to you and the students who register in your course.

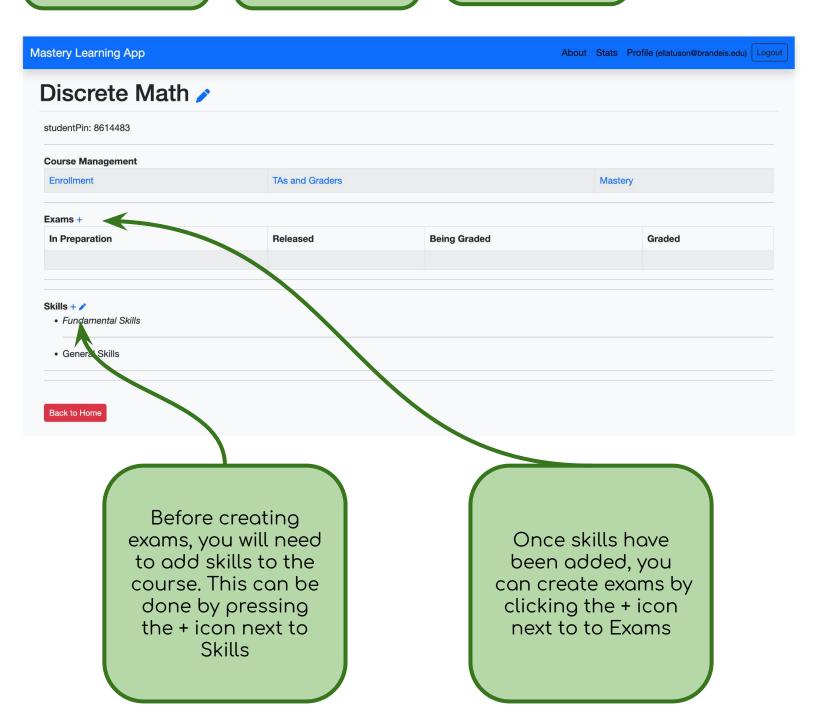
Students register using a 7 digit pin number which will be created for you when you make this course.

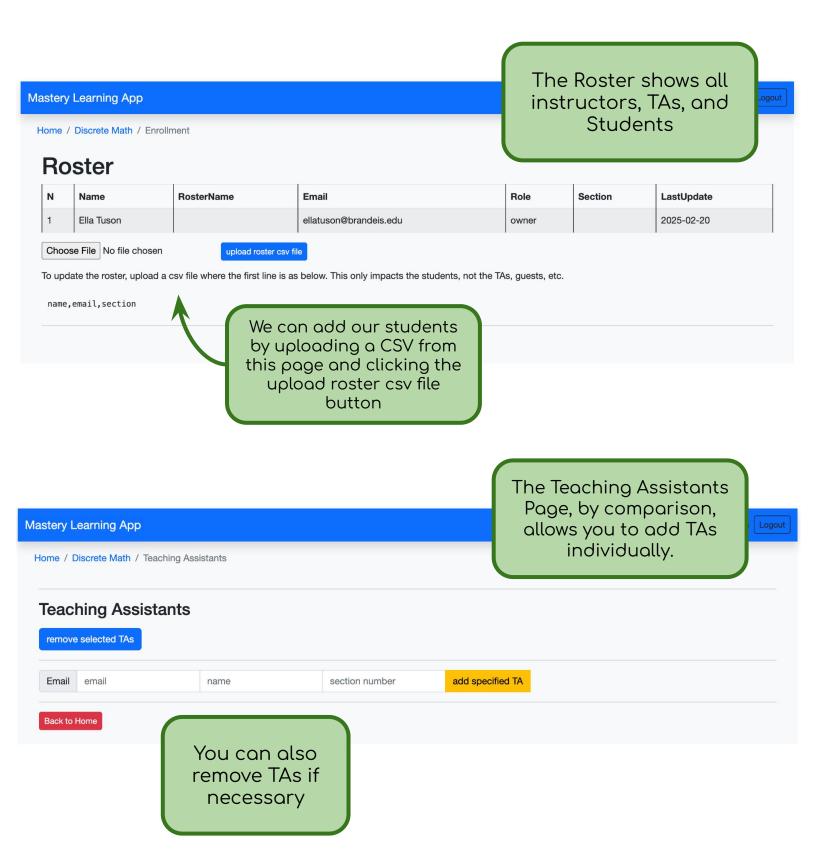
This is the home page for a course on the Mastery Learning App

Under Course Management we have Enrollment, TAs and Graders, and Mastery

Click on
Enrollment to
add students to
your course

Click on TAs and Graders to add and remove course assistants Click on Mastery
to see an
overview of
student
performance





The Skill Mastery
page provides
information on
student
performance in the
course

Mastery Learning App

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# **Skill Mastery**

-						
Name	Email	Section	Fskills	Gskills		
	student1@stemmla.com	1	0	0		
	student2@stemmla.com	1	0	0		
	student3@stemmia.com	2	0	0		
	student4@stemmla.com	1	0	0		
	student5@stemmla.com	2	0	0		
	student6@stemmla.com	2	0	0		
	student7@stemmla.com	2	0	0		

Download as CSV file

Students who have not mastered any skin, are highlighted.

Mastery Results by Exam

You can click on Download as CSV file to move grades to other platforms.

As of right now, no exams have been given, and no students have mastered any skills. Rows with students who have not mastered any skills are displayed in yellow, making it easy to estimate who will be dropping the class after the first exam.

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	Tou can doo skills individually through			
Mastery Learning App	the form on the Add Skill page, or you can import skills from an existing course	Stats Profile (ellatuson@brandeis.edu) Logout		
Home / Discrete Math / Add Skill	by pressing the Import Skills from			
Add Skill	another course button			
Import Skills from another course				
OR				
Enter Skill Information for a new Skill Skill Name				
Short Name (1 to 6 characters):				
Skill Level				
fundamental				
Skill Description				
		1		
Submit				

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Clicking on the Import Skills from another course button will bring you to a page where you can select the course you'd like to import from.

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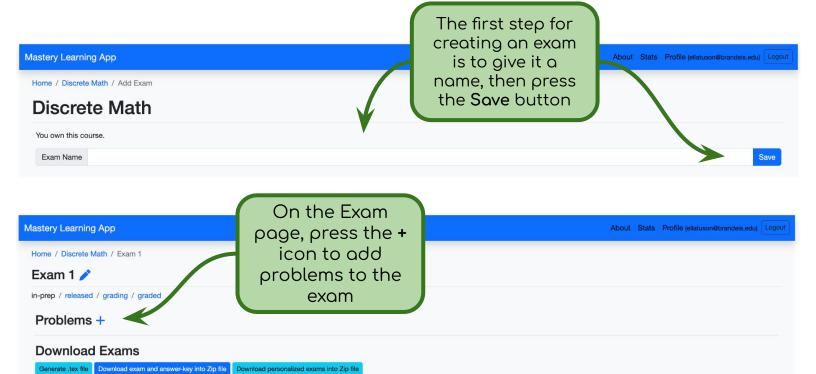
Skills from Discrete Math Problem Bank created on Wed Dec 04 2024 12:42:57 GMT+0000 (Coordinated Universal Time)

#### mport All Skills

- F01 :: Propositional Logic: Syntax and Semantics w. \* Dec 04 2024 13:05:58 GMT+0000 (Coordinated Universal Time)
- F02 :: Propositional Logic: Truth Tables and Satisfiability We \* Dec 04 2024 13:06:07 GMT+0000 (Coordinated Universal Time)
- F03 :: Propositional Logic: Translation to/from English Wed Dec 0+ 3024 13:06:15 GMT+0000 (Coordinated Universal Time)
- F04 :: Propositional Logic: Boolean Algebra Wed Dec 04 2024 13:06:24 VT+0000 (Coordinated Universal Time)
- F05 :: Predicate Calculus: Syntax and Semantics Wed Dec 04 2024 13:16:56 MT+0000 (Coordinated Universal Time)
- F06 :: Predicate Calculus: Translation to/from English Wed Dec 04 2024 13:18:08 MT+0000 (Coordinated Universal Time)
- F07 :: Predicate Calculus: Simplification Rules Wed Dec 04 2024 13:28:09 GMT+0000 ( dinated Universal Time)
- 000 (Coordinated Universal Time) • F08 :: Proof Techniques: Direct and ContraPositive Proofs Wed Dec 04 2024 13:36:47 GM ersal Time)
- F09 :: Proof Techniques: Proof by Contradiction Wed Dec 04 2024 13:37:42 GMT+0000 (Coordinated)
- F10 :: Proof Techniques: Proof by Cases Wed Dec 04 2024 13:38:44 GMT+0000 (Coordinated Universal Times)
- F11 :: Proof Techniques: Induction Wed Dec 04 2024 13:39:32 GMT+0000 (Coordinated Universal Time)
- F12 :: Sets: Syntax and Semantics Wed Dec 04 2024 13:50:27 GMT+0000 (Coordinated Universal Time)
- F13 :: Sets: Algebra Wed Dec 04 2024 13:57:51 GMT+0000 (Coordinated Universal Time)
- F14 :: Sets; Categorical Operations Wed Dec 04 2024 14:00:49 GMT+0000 (Coordinated Universal Time)
- F15 :: Functions: Syntax and Semantics Wed Dec 04 2024 14:05:21 GMT+0000 (Coordinated Universal Time)
- F16 :: Functions: Composition Wed Dec 04 2024 14:13:33 GMT+0000 (Coordinated Universal Time) • F17 :: Functions: Properties Wed Dec 04 2024 14:16:35 GMT+0000 (Coordinated Universal Time)
- F18 :: Combinatorics: Addition and Multiplication Principles Wed Dec 04 2024 14:42:03 GMT+0000 (Coordinated Universal Time)
- F19 :: Combinatorics: Permutations and Combinations Wed Dec 04 2024 14:43:25 GMT+0000 (Coordinated Universal Time)

This will bring you to a page where you can review the skills in that course. When you are ready, you can click the Import All Skills button to copy the skills into your current course.

This will also copy over all of the problems associated with those skills from the original class.

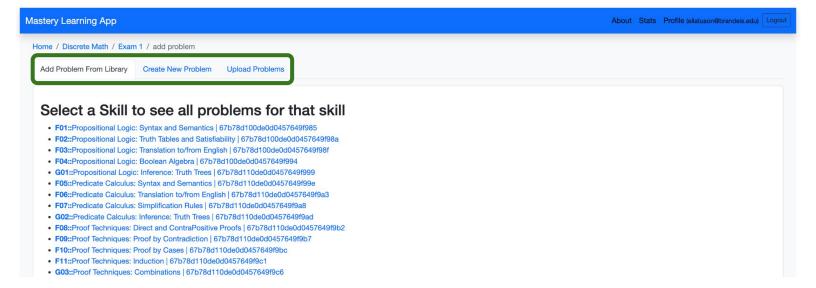


The three options for adding a problem are to use an existing problem under the Add Problem From Library tab

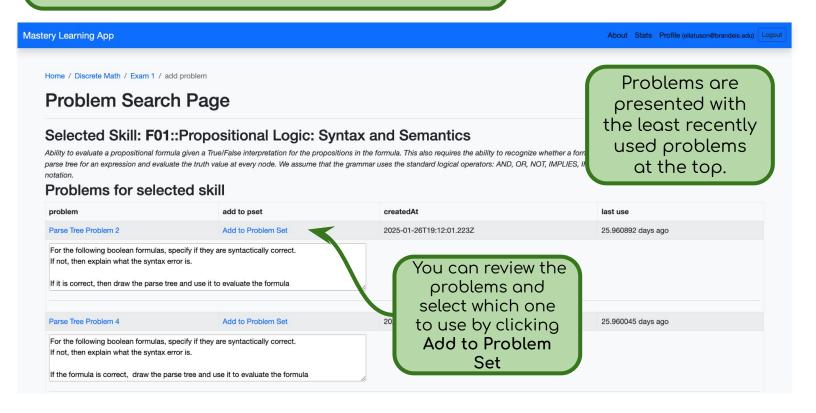
Release for Grading

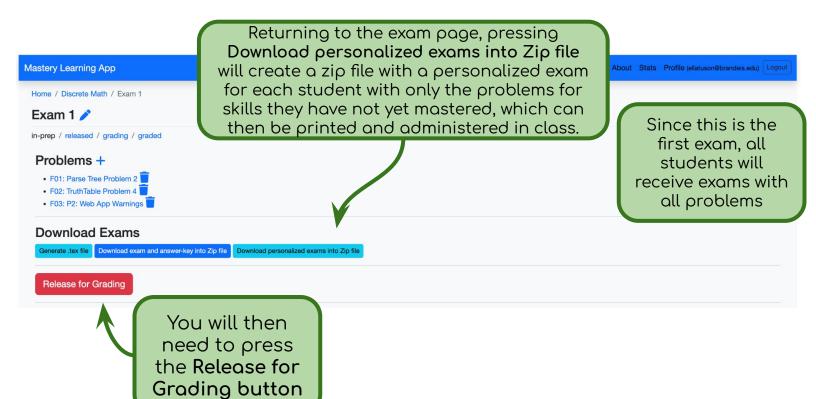
To create a new problem on the app using a form via the Create New Problem tab

Or to upload a problem from your computer using the **Upload Problems** tab



When using an existing problem, selecting a skill from the course skill list will bring you to a list of all of the problems for the course that are associated with that skill.





Mastery Learning App About Stats Profile (ellatuson@brandeis.edu) Logo Home / Discrete Math / Exam 1 Exam 1 🥕 For MLA0 courses, in-app grading is in-prep / released / grading / graded not supported. Instead, you will need to **Problems** • F01: Parse Tree Problem 2 upload grades as a spreadsheet. • F02: TruthTable Problem 4 • F03: P2: Web App Warnings **Upload Grades** Select a CSV file containing the grades The first row should be the column names: name,email,S1,S2,...,Sk where the S1,...,Sk are the short names of the skills tested in this problem set the values in the rows should be 1 (or 1.0) if they mastered the skill, 0 (or 0.0) if they did not master the skill on this exam (but may have mastered it in the past), Every column must have a 1 or a 0 in it. Grades for Exam 1 Choose File No file chosen CSV file format: gradescope >

Mastery Learning App

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The problem set can now be graded. When you have completed the grading, you can change the status to "graded" by clicking the "Post Grades" button below. Students will then be able to see their grades on this exam.

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upload grades file (csv)

# Skill Mastery

Name	Email	Section	Fskills	Gskills	F01 2/3	F02 1/3
Student 1	student1@stemmia.com	1	2	0	1	1
Student 2	student2@stemmla.com	1	1	0	1	0
Student 3	student3@stemmla.com	2	0	0	0	0
	student4@stemmla.com	1	0	0	0	0
	student5@stemmla.com	2	0	0	0	0
in)	student6@stemmla.com	2	0	0	0	0
	student7@stemmla.com	2	0	0	0	0

Download as CSV file

Students who have not mastered any skills are highlighted.

### Mastery Results by Exam

• Exam 1

Uploading grades will take you yo the Skill Mastery page, where we can see the results.