Mastery Learning App Stats Login

Login to the Mastery App

You must have a Google Email to login to the Peer Review App on this server.
(or: log in with username and password)

🔳 Sign in with Google   **Log in with Password**

See the GitHub source code ↗ if you want to set up your own server.

Select Log in With Password

Mastery Learning App Stats Login

Login to the Mastery App

Click below to log in (if you normally sign in with Google, sign in with Google ↗)
(or: register a new account, then sign in)

Log in   Register

Email address

Password

Log In

Click Register to create a new account

Mastery Learning App About Stats Profile (ellatuson@brandeis.edu) Logout

Mastery Learning App

Promoting Effective and Engaged Learning

Show Archived and Current Courses

Courses I'm taking	Courses I'm TAing	Courses I'm Teaching
You are not taking any courses.	• Discrete Math Problem Bank	• Intro to Python Programming 🚫 • Automata Theory 🚫 Create a new course

To create a new course, click the button in the Courses I'm Teaching section

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

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 [   ]

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

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

Type of Course
Proctored Skill-based Paper Exams

○ **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 skill-based problems. We currently have master courses for PreCalculus, Differential Calculus, and Integral Calculus.

○ **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 [...] students in class. Each question will test a particular skill or concept. The students will be able to answe[...] e answers using the app.

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

☐ I am not a robot
☐ I am a robot

[Create the new course]

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

Mastery Learning App

About   Stats   Profile (ellatuson@brandeis.edu)   Logout

Discrete Math ✏️

studentPin: 8614483

Course Management

| Enrollment | TAs and Graders | Mastery |

Exams +

In Preparation	Released	Being Graded	Graded

Skills + ✏️

- *Fundamental Skills*

- *General Skills*

Back to Home

Before creating exams, you will need to add skills to the course. This can be done by pressing the + icon next to Skills

Once skills have been added, you can create exams by clicking the + icon next to to Exams

Mastery Learning App

Logout

Home / Discrete Math / Enrollment

Roster

N	Name	RosterName	Email	Role	Section	LastUpdate
1	Ella Tuson		ellatuson@brandeis.edu	owner		2025-02-20

Choose File | No file chosen | upload roster csv file

To update the roster, upload a csv file where the first line is as below. This only impacts the students, not the TAs, guests, etc.

name,email,section

Mastery Learning App

Logout

Home / Discrete Math / Teaching Assistants

Teaching Assistants

remove selected TAs

| Email | email | name | section number | add specified TA |

Back to Home

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

Home / Discrete Math / Mastery

Skill Mastery

Name	Email	Section	Fskills	Gskills
...	student1@stemmla.com	1	0	0
...	student2@stemmla.com	1	0	0
...	student3@stemmla.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 skills 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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Home / Discrete Math / Add Skill

Add Skill

Import Skills from another course

> You can add skills individually through the form on the Add Skill page, or you can import skills from an existing course by pressing the Import Skills from another course button

OR

Enter Skill Information for a new Skill

Skill Name

Short Name (1 to 6 characters):

Skill Level

fundamental

Skill Description

Submit

> 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)

Import All Skills

> 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.

- F01 :: Propositional Logic: Syntax and Semantics Wed Dec 04 2024 13:05:58 GMT+0000 (Coordinated Universal Time)
- F02 :: Propositional Logic: Truth Tables and Satisfiability Wed Dec 04 2024 13:06:07 GMT+0000 (Coordinated Universal Time)
- F03 :: Propositional Logic: Translation to/from English Wed Dec 04 2024 13:06:15 GMT+0000 (Coordinated Universal Time)
- F04 :: Propositional Logic: Boolean Algebra Wed Dec 04 2024 13:06:24 GMT+0000 (Coordinated Universal Time)
- F05 :: Predicate Calculus: Syntax and Semantics Wed Dec 04 2024 13:16:56 GMT+0000 (Coordinated Universal Time)
- F06 :: Predicate Calculus: Translation to/from English Wed Dec 04 2024 13:18:08 GMT+0000 (Coordinated Universal Time)
- F07 :: Predicate Calculus: Simplification Rules Wed Dec 04 2024 13:28:09 GMT+0000 (Coordinated Universal Time)
- F08 :: Proof Techniques: Direct and ContraPositive Proofs Wed Dec 04 2024 13:36:47 GMT+0000 (Coordinated Universal Time)
- F09 :: Proof Techniques: Proof by Contradiction Wed Dec 04 2024 13:37:42 GMT+0000 (Coordinated Universal Time)
- F10 :: Proof Techniques: Proof by Cases Wed Dec 04 2024 13:38:44 GMT+0000 (Coordinated Universal Time)
- 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)

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Home / Discrete Math / Add Exam

Discrete Math

You own this course.

| Exam Name | | Save |

The first step for creating an exam is to give it a name, then press the **Save** button

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Mastery Learning App

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Home / Discrete Math / Exam 1

Exam 1 ✏️

in-prep / released / grading / graded

Problems +

On the Exam page, press the **+** icon to add problems to the exam

Download Exams

Generate .tex file   Download exam and answer-key into Zip file   Download personalized exams into Zip file

Release for Grading

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

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

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Mastery Learning App

About   Stats   Profile (ellatuson@brandeis.edu)   Logout

Home / Discrete Math / Exam 1 / add problem

Add Problem From Library   Create New Problem   Upload Problems

Select a Skill to see all problems for that skill

- **F01::**Propositional Logic: Syntax and Semantics | 67b78d100de0d0457649f985
- **F02::**Propositional Logic: Truth Tables and Satisfiability | 67b78d100de0d0457649f98a
- **F03::**Propositional Logic: Translation to/from English | 67b78d100de0d0457649f98f
- **F04::**Propositional Logic: Boolean Algebra | 67b78d100de0d0457649f994
- **G01::**Propositional Logic: Inference: Truth Trees | 67b78d110de0d0457649f999
- **F05::**Predicate Calculus: Syntax and Semantics | 67b78d110de0d0457649f99e
- **F06::**Predicate Calculus: Translation to/from English | 67b78d110de0d0457649f9a3
- **F07::**Predicate Calculus: Simplification Rules | 67b78d110de0d0457649f9a8
- **G02::**Predicate Calculus: Inference: Truth Trees | 67b78d110de0d0457649f9ad
- **F08::**Proof Techniques: Direct and ContraPositive Proofs | 67b78d110de0d0457649f9b2
- **F09::**Proof Techniques: Proof by Contradiction | 67b78d110de0d0457649f9b7
- **F10::**Proof Techniques: Proof by Cases | 67b78d110de0d0457649f9bc
- **F11::**Proof Techniques: Induction | 67b78d110de0d0457649f9c1
- **G03::**Proof Techniques: Combinations | 67b78d110de0d0457649f9c6

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.

Home / Discrete Math / Exam 1 / add problem

Problem Search Page

Selected Skill: F01::Propositional Logic: Syntax and Semantics

Ability to evaluate a propositional formula given a True/False interpretation for the propositions in the formula. This also requires the ability to recognize whether a form... parse tree for an expression and evaluate the truth value at every node. We assume that the grammar uses the standard logical operators: AND, OR, NOT, IMPLIES, I... notation.

Problems are presented with the least recently used problems at the top.

Problems for selected skill

problem	add to pset	createdAt	last use
Parse Tree Problem 2	Add to Problem Set	2025-01-26T19:12:01.223Z	25.960892 days ago
For the following boolean formulas, specify if they are syntactically correct. If not, then explain what the syntax error is. If it is correct, then draw the parse tree and use it to evaluate the formula			
Parse Tree Problem 4	Add to Problem Set	20	25.960045 days ago
For the following boolean formulas, specify if they are syntactically correct. If not, then explain what the syntax error is. If the formula is correct, draw the parse tree and use it to evaluate the formula			

You can review the problems and select which one to use by clicking **Add to Problem Set**

Returning to the exam page, pressing **Download personalized exams into Zip file** will create a zip file with a personalized exam for each student with only the problems for skills they have not yet mastered, which can then be printed and administered in class.

Home / Discrete Math / Exam 1

Exam 1 ✏️

in-prep / released / grading / graded

Problems +

- F01: Parse Tree Problem 2 🗑️
- F02: TruthTable Problem 4 🗑️
- F03: P2: Web App Warnings 🗑️

Since this is the first exam, all students will receive exams with all problems

Download Exams

Generate .tex file   Download exam and answer-key into Zip file   Download personalized exams into Zip file

Release for Grading

You will then need to press the **Release for Grading** button

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Home / Discrete Math / Exam 1

Exam 1 ✏️

in-prep / released / grading / graded

Problems

- F01: Parse Tree Problem 2
- F02: TruthTable Problem 4
- F03: P2: Web App Warnings

For MLA0 courses, in-app grading is not supported. Instead, you will need to upload grades as a spreadsheet.

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 ⌄

upload grades file (csv)

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.

About   Stats   Profile (ellatuson@brandeis.edu)   Logout

Home / Discrete Math / Mastery

Skill Mastery

Name	Email	Section	Fskills	Gskills	F01 2/3	F02 1/3
Student 1	student1@stemmla.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
...	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.