MIT LORE

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Outline

- Motivation
- Goal
- About LORE
- Technical overview
- Demo
- What's next
- Credits and Acknowledgements
- Questions

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Motivation

MITx runs multiple courses with similar content running on different instances of OpenEdx, authored by the same team of course authors

Course authors need an efficient ways to discover, share and catalog the content from all these courses with the goal of using the content in future courses.

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Goal

The Learning Objects Repository for Education (LORE) project seeks to build a library of online "learning objects" that will enable the efficient reuse of resources from previous MITx (OpenEdx) courses by professors and instructional staff.

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Learning Objects Repository*

A learning object repository is a kind of digital library. It enables educators to share, manage and use educational resources.

A more narrow definition would also require that repositories implement a metadata standard.

* http://edutechwiki.unige.ch/en/Learning_object_repository

What is LORE

LORE is an open source web application that enables academic institutions to offer a multitenant, SaaS solution that enables professors and instructional staff to :

- Discover
- Catalog & curate
- Reuse

OpenedX course materials in their future courses.

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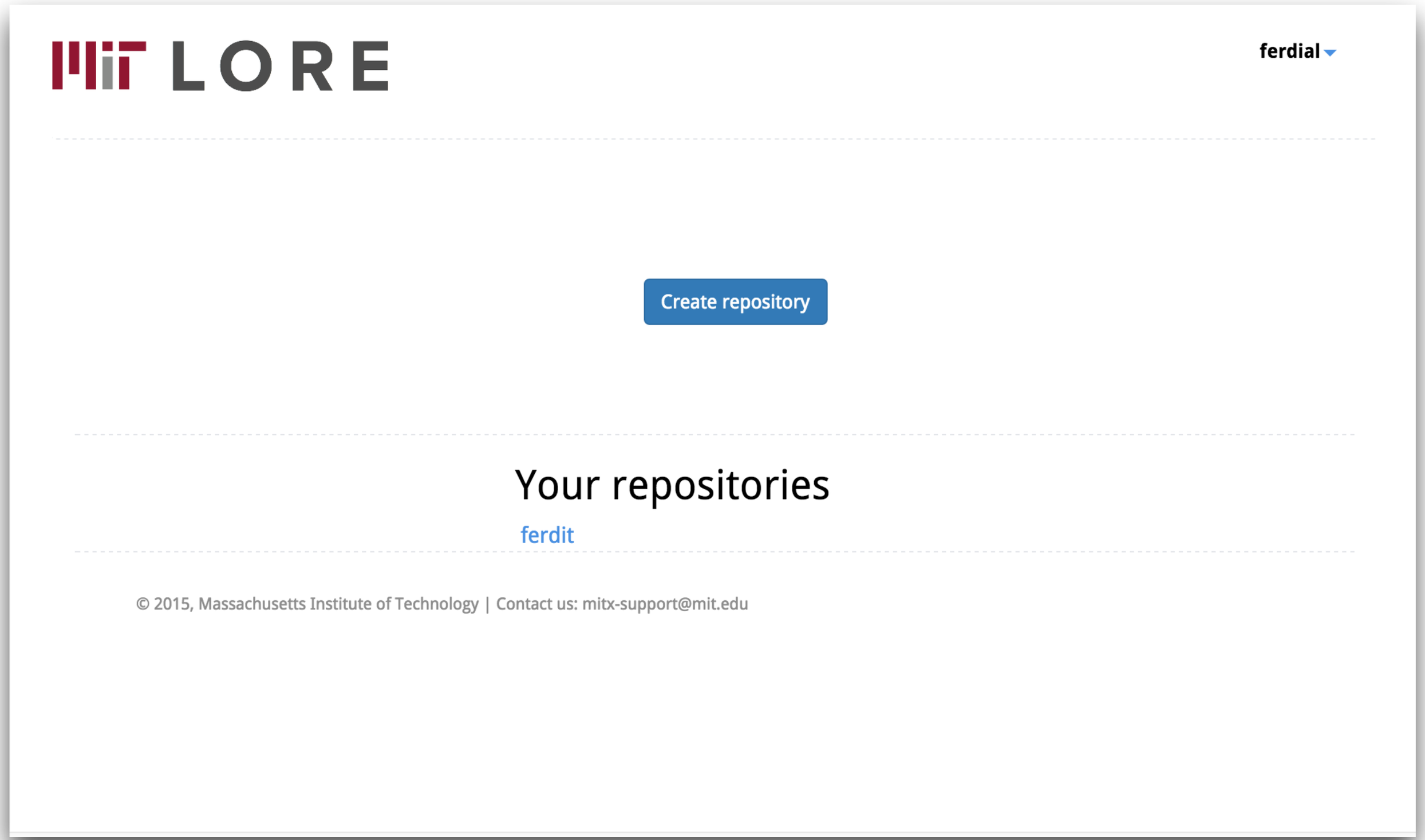
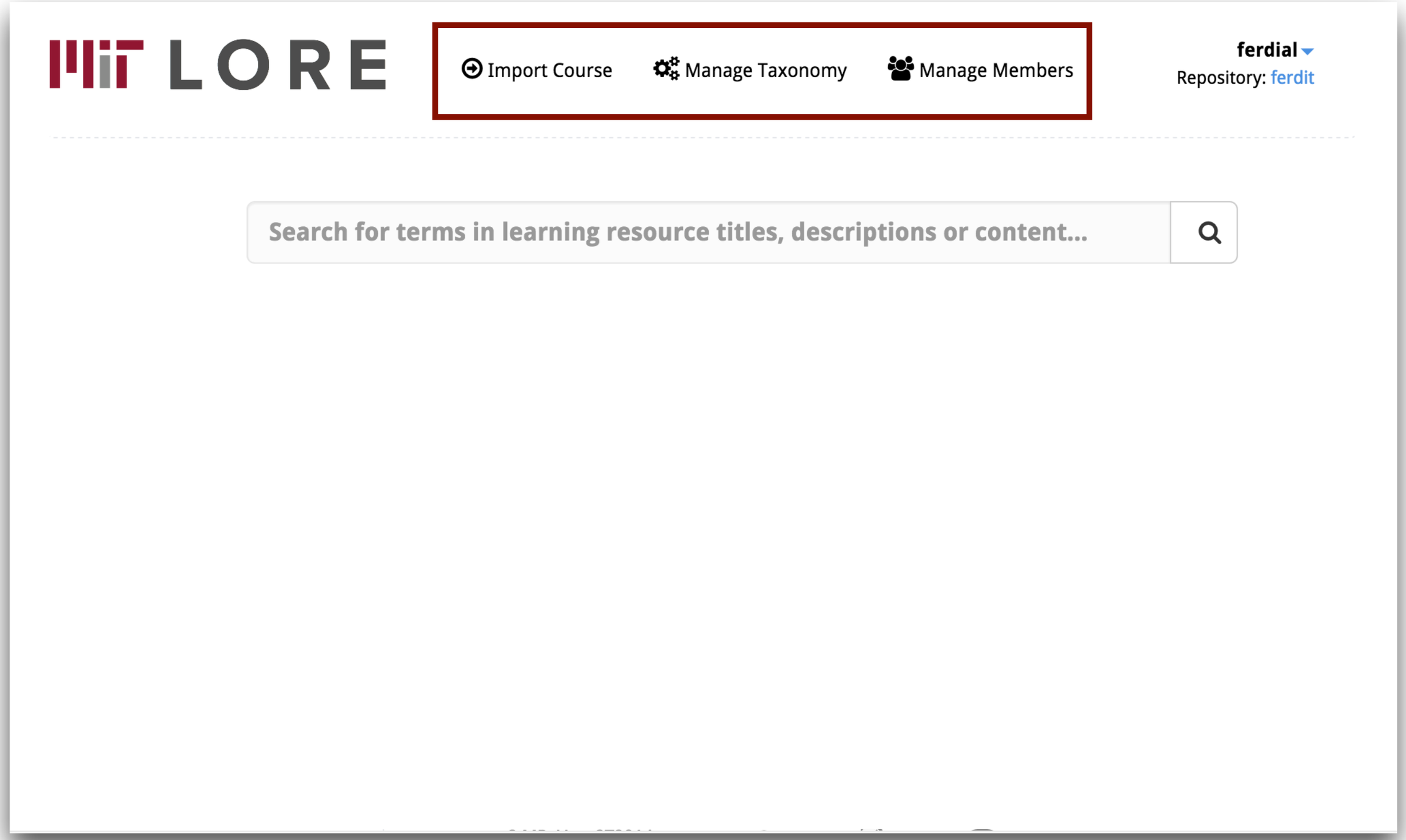
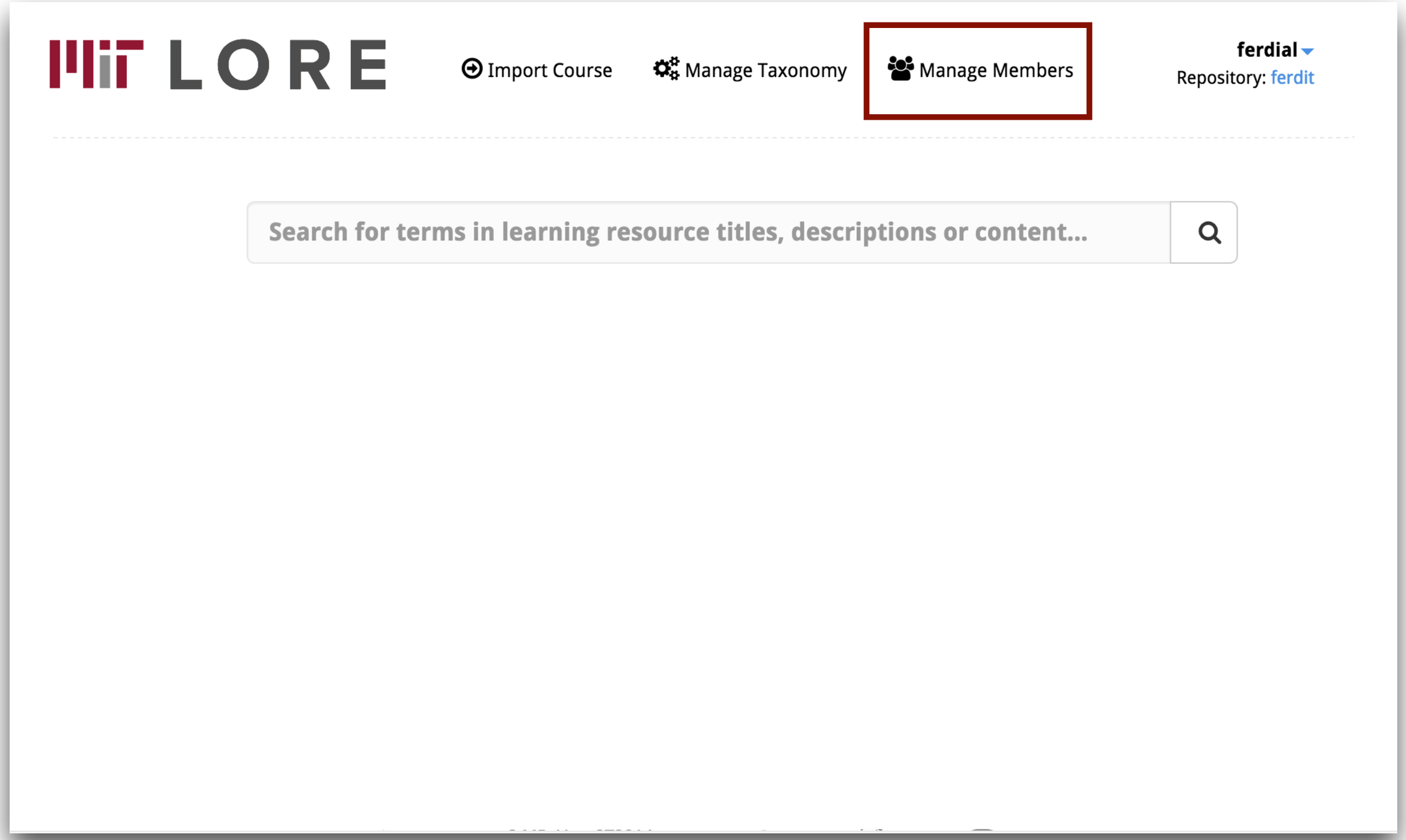
Multitenant



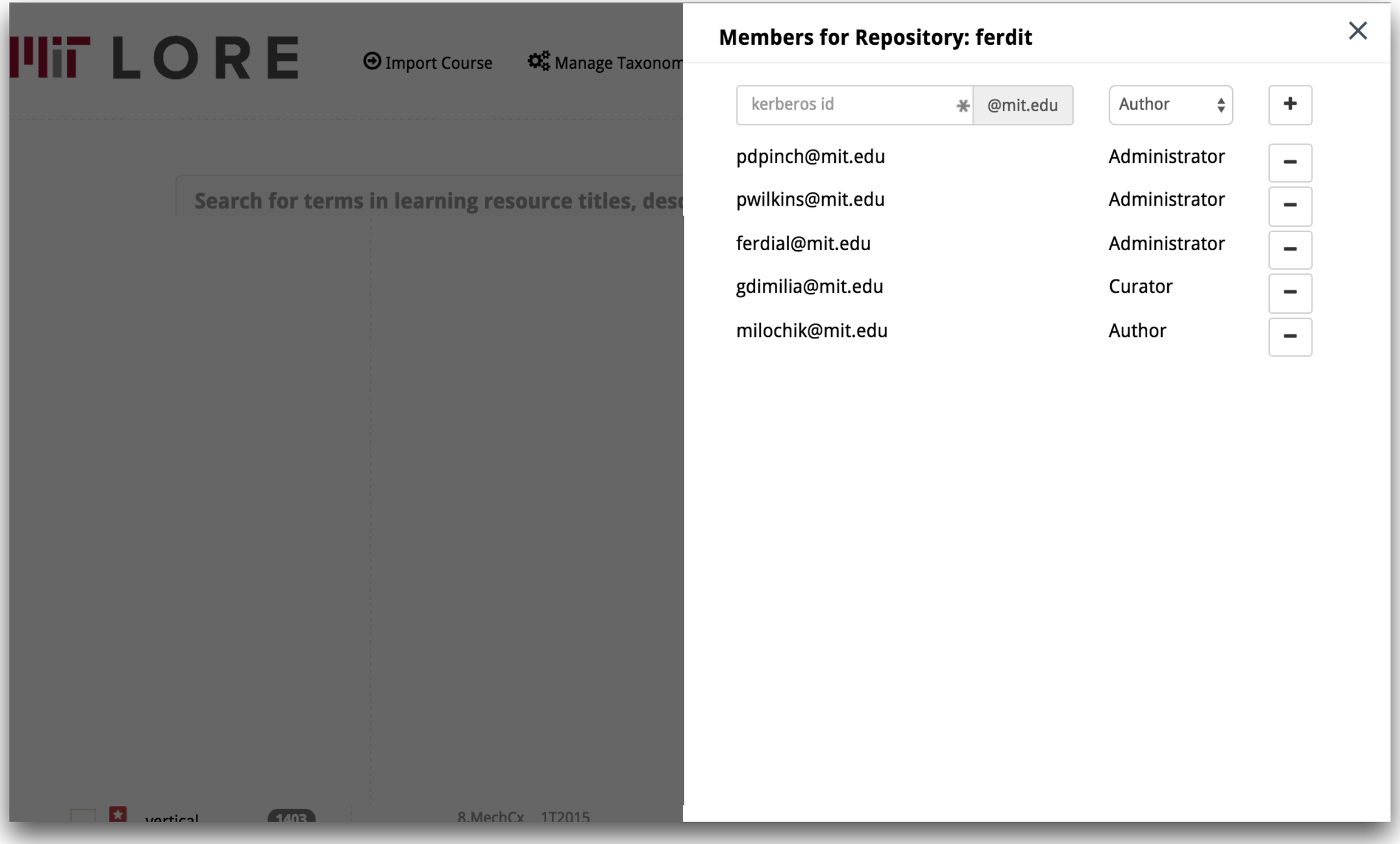
Multitenant - users



Multitenant - users



Multitenant - users



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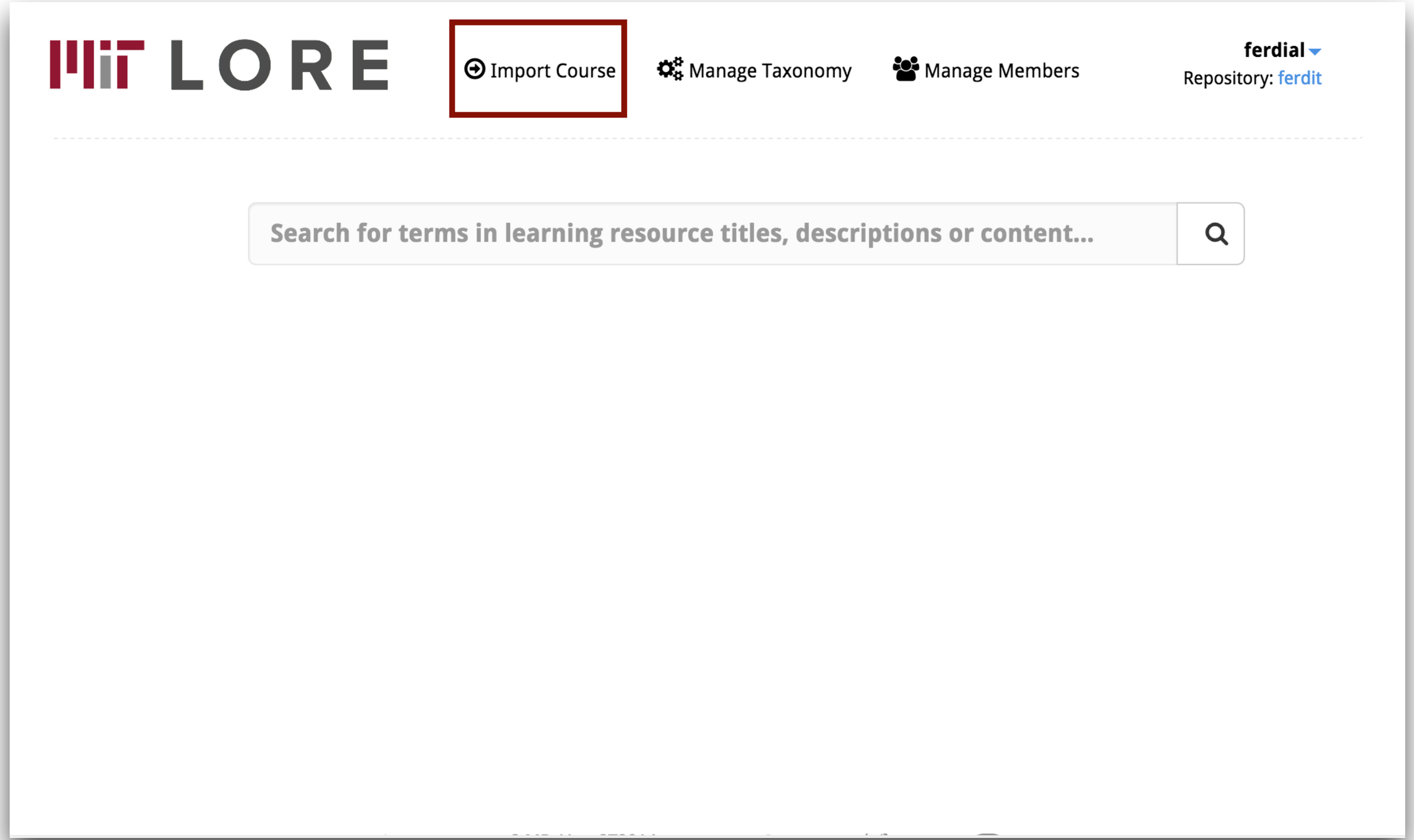
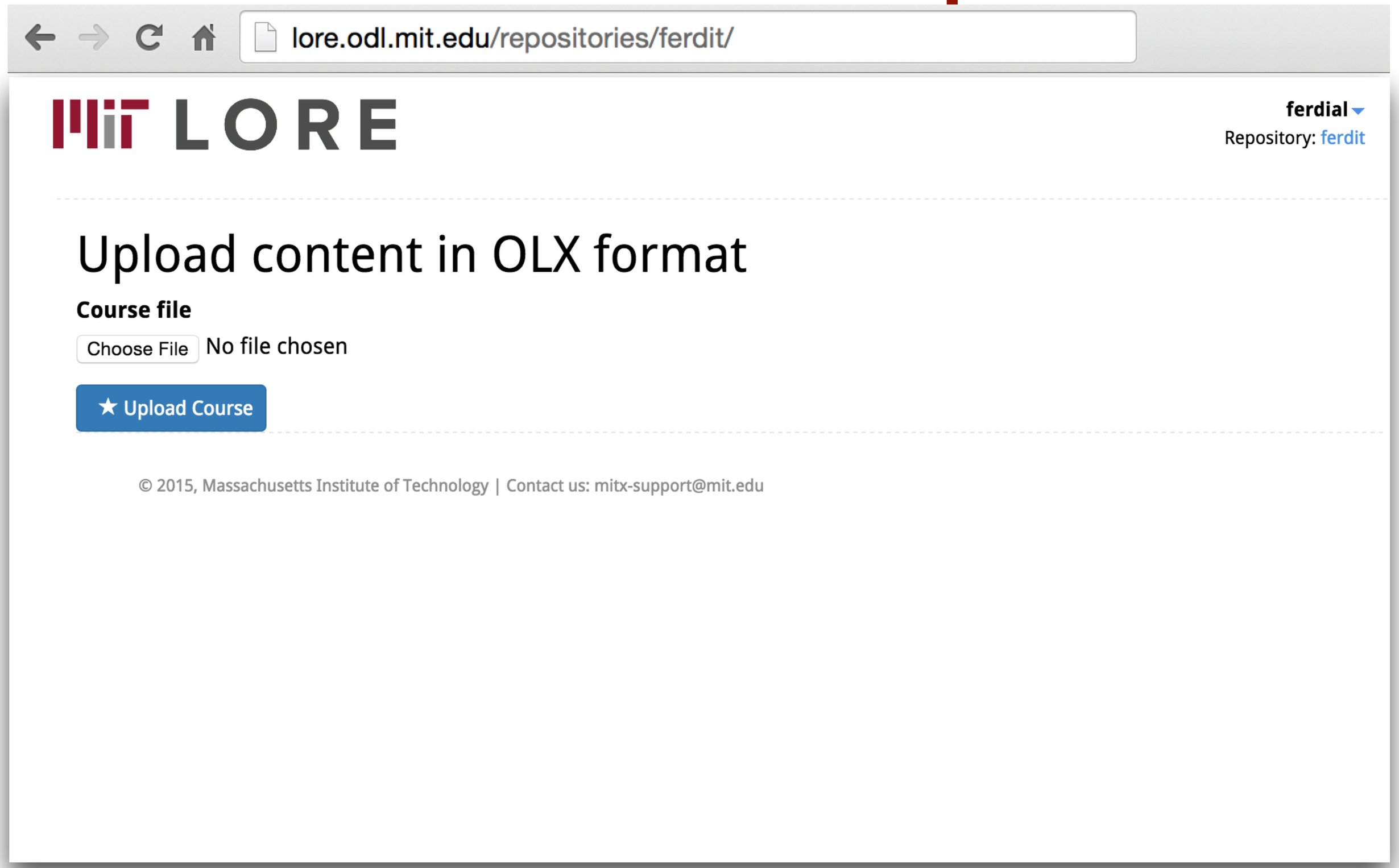
Discover - Import



Discover - Import



Discover - Import

MIT LORE

Import Course | Manage Taxonomy | Manage Members

ferdial
Repository: ferdit

Search for terms in learning resource titles, descriptions or content...

Course

- 8.MechCx 4175
- 8.MReVx 789
- 8.01 687

Run

- 1T2015 4175
- 2T2014 789
- 2014_Fall 687

Item Type

- problem 1982
- vertical 1403
- discussion 1064
- html 758
- sequential 273
- video 104
- chapter 64
- course 3

Sort by: Number of Views (desc)

Warmup: Using a Direct Measurement Video → Export
Advanced Introductory Classical Mechanics / 1: Newton's Laws of Motion / LAB 1: Relating Force and Acceleration / Lab Activity: Relating Force and Acceleration / Warmup: Using a Direct Measurement Video
No description provided.
8.MechCx 1T2015 10000 597 68.0 Preview

discussion_4141e5faf9a3 → Export
Mechanics ReView / 3: Applying Newton's Laws / Constrained Motion and Constraint Forces / Constraints on a Single Point Particle / discussion_4141e5faf9a3
asdfadsf
8.MReVx 2T2014 9998 805 83.0 Preview

Numerical Response → Export
Advanced Introductory Classical Mechanics / 0: Introduction / Learn about Homework / Numerical Response
No description provided.
8.MechCx 1T2015 9997 809 82.0 Preview

The Calculus of 2D Motion → Export
Advanced Introductory Classical Mechanics / 6: Applying SIM to Problems in Planar Dynamics / The Calculus of 2D Motion

Discover - Context

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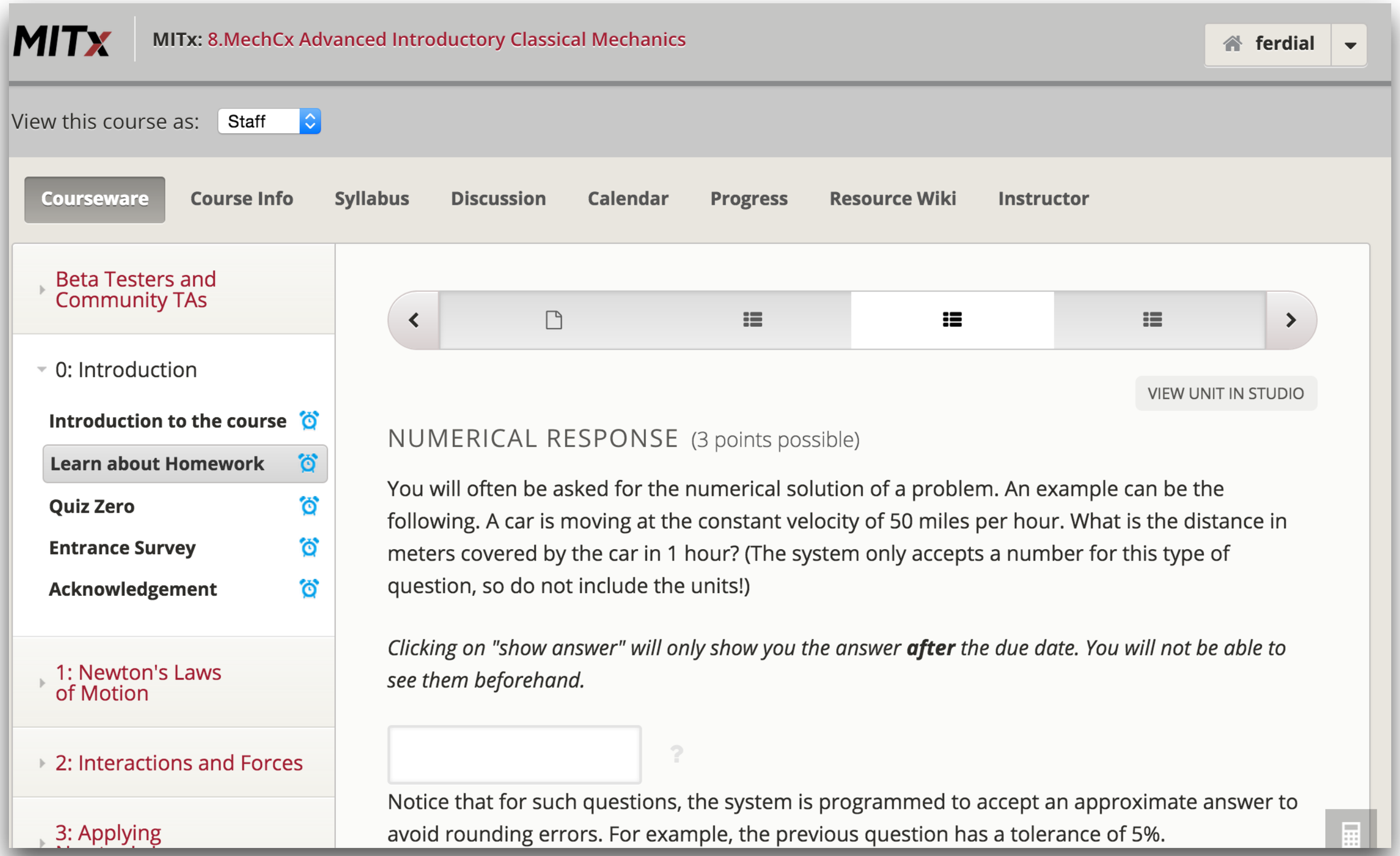

Discover - Search

MIT LORE

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Sort by: Number of Views (desc)

Course

- 8.MechCx 43
- 8.01 11
- 8.MReVx 9

Run

- 1T2015 43
- 2014_Fall 11
- 2T2014 9

Item Type

- sequential 16

Storage → Export
Advanced Introductory Classical Mechanics / Storage
No description provided.
8.MechCx 1T2015 9920 83 83.0 Preview

How Does Gravity Affect Vertical Oscillations? Part 4 → Export
Advanced Introductory Classical Mechanics / 14: Simple Harmonic Oscillation / Lab 14: Simple Harmonic Oscillations / Block and Spring: Vertical Oscillations / How Does Gravity Affect Vertical Oscillations? Part 4
No description provided.
8.MechCx 1T2015 9900 428 69.0 Preview

Causes of Circular Motion → Export
... / Week 4 (Sept 22-26) / W4D2 Reading Questions / Causes of Circular Motion
No description provided.
8.01 2014_Fall 9777 76 68.0 Preview

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Catalog & Curate

- Static metadata
- User defined taxonomy system
- Dynamic Metadata (Analytics system integration)

Static metadata

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The Calculus of 2D Motion → Export
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Taxonomy

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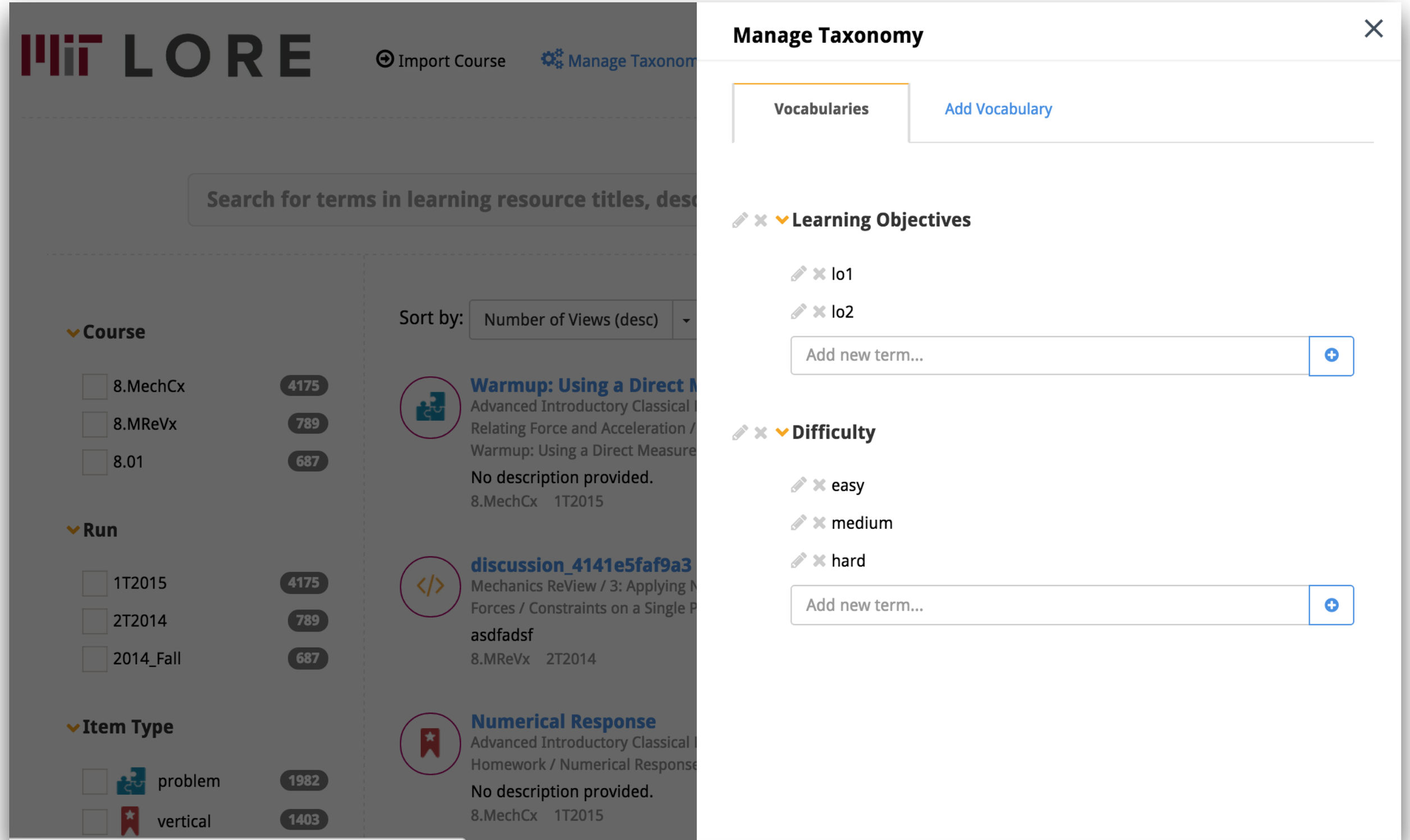
Taxonomy


LORE
Import Course
Manage Taxonom
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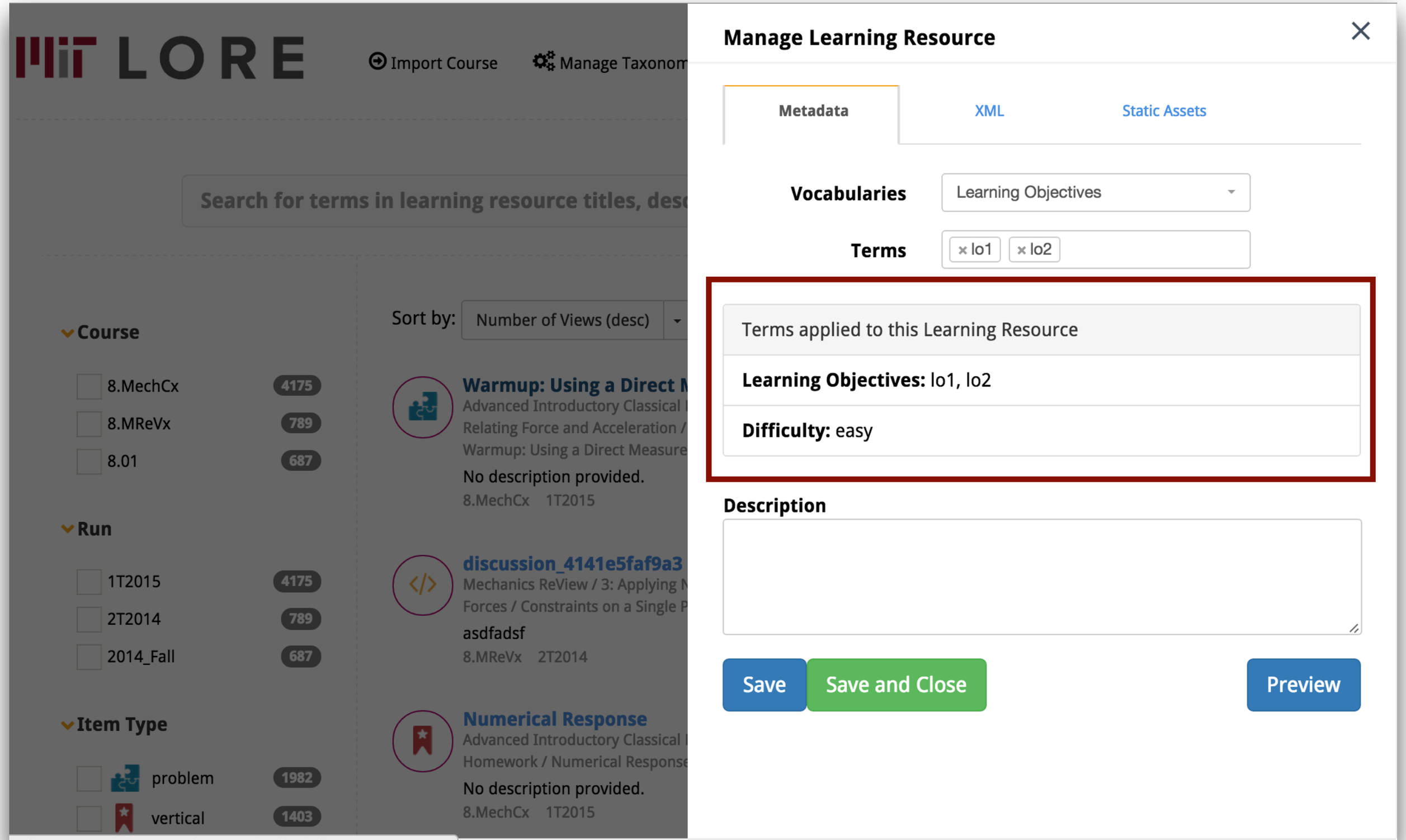
8.MechCx 1T2015
Manage Taxonomy
Vocabularies
Add Vocabulary
Learning Objectives
lo1
lo2
Add new term...
Difficulty
easy
medium
hard
Add new term...

Taxonomy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Homework / Numerical Response
No description provided.
8.MechCx 1T2015
Manage Learning Resource
Metadata
XML
Static Assets
Vocabularies
Learning Objectives
Terms
× lo1
× lo2
Terms applied to this Learning Resource
Learning Objectives: lo1, lo2
Difficulty: easy
Description
Save
Save and Close
Preview

Taxonomy

- problem 1982
- vertical 1403
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Difficulty

- not tagged 5648
- easy 1
- hard 1
- medium 1

Learning Objectives

- not tagged 5649
- lo2 2
- lo1 1

Homework / Numerical Response

No description provided.

8.MechCx 1T2015 9997 809 82.0 Preview

The Calculus of 2D Motion → Export

Advanced Introductory Classical Mechanics / 6: Applying SIM to Problems in Planar Dynamics / The Calculus of 2D Motion

No description provided.

8.MechCx 1T2015 9996 903 65.0 Preview

MBT 8 → Export

Advanced Introductory Classical Mechanics / Questions for 8.01x / Questions for 801 Final / MBT 8

some description

8.MechCx 1T2015 9995 419 72.0 Preview

Two connected blocks, an inclined plane with friction → Export

Mechanics ReView / Homework for Unit 3: Applying Newton's Laws / Applying Newton's Laws Homework / Two connected blocks, an inclined plane with friction

No description provided.

8.MReVx 2T2014 9994 389 97.0 Preview

Describing Rotational Motion → Export

Advanced Introductory Classical Mechanics / 10: Torque and Rotation about a Fixed Axis / Choosing an Axis of Rotation and Describing the Direction of Rotation / Describing Rotational Motion

No description provided.

8.MechCx 1T2015 9994 772 82.0 Preview

Applying Newton's Laws Introduction → Export

Mechanics ReView / 3: Applying Newton's Laws / Applying Newton's Laws / Applying Newton's Laws Introduction

Analytics

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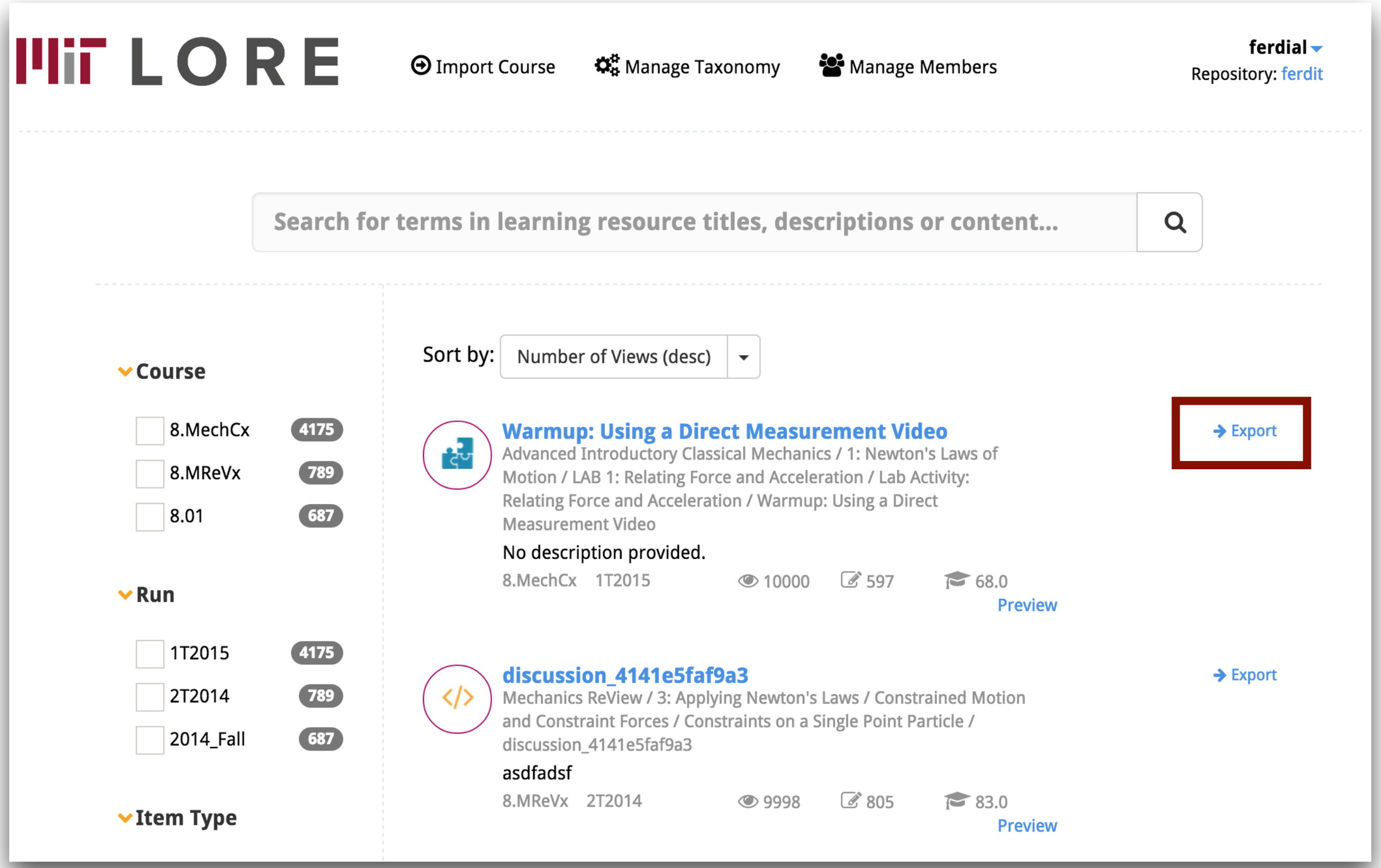
Reuse


MIT LORE
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ferdial
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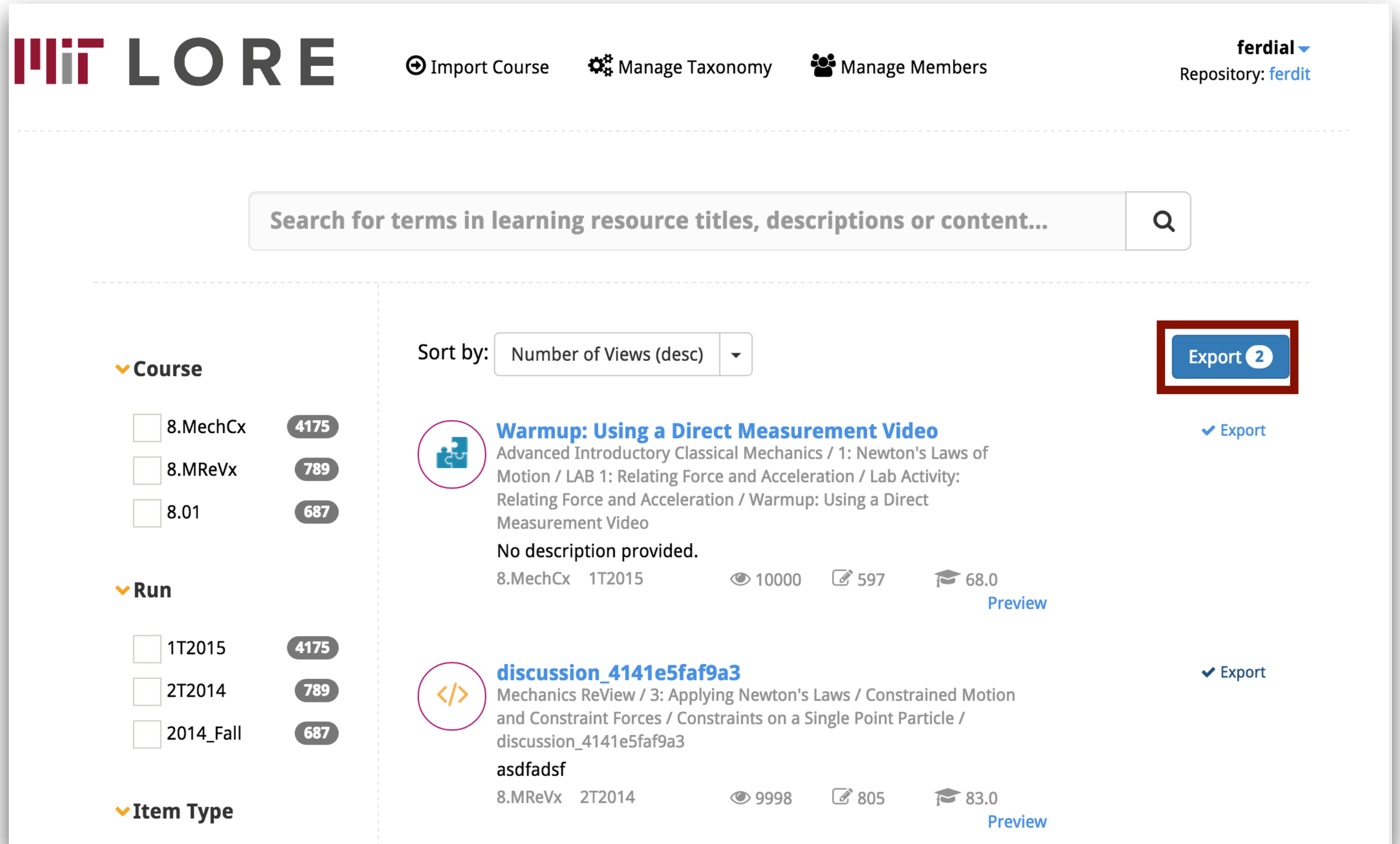
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Export 2
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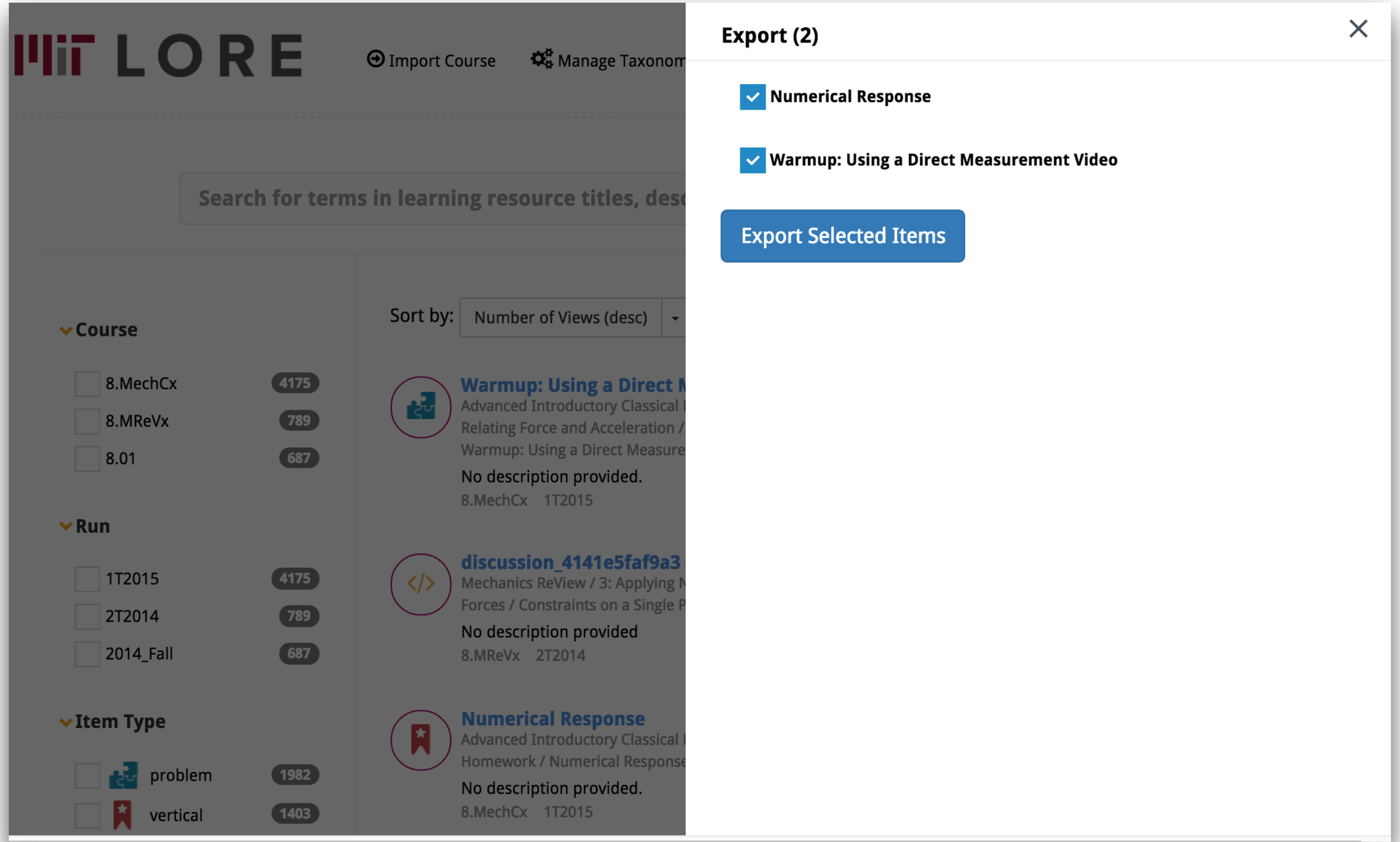
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8.MechCx 1T2015
Export (2)
Numerical Response
Warmup: Using a Direct Measurement Video
Export Selected Items

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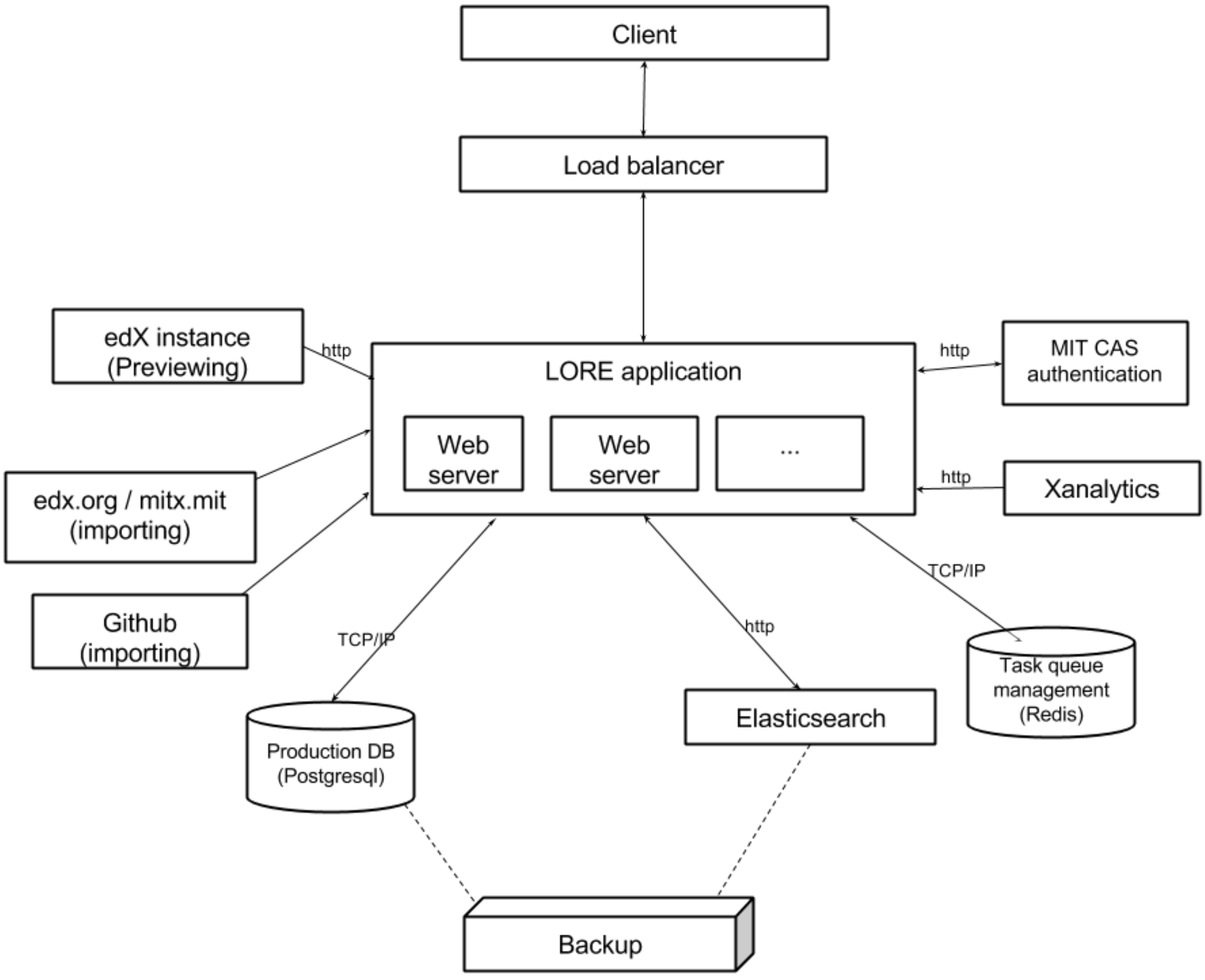
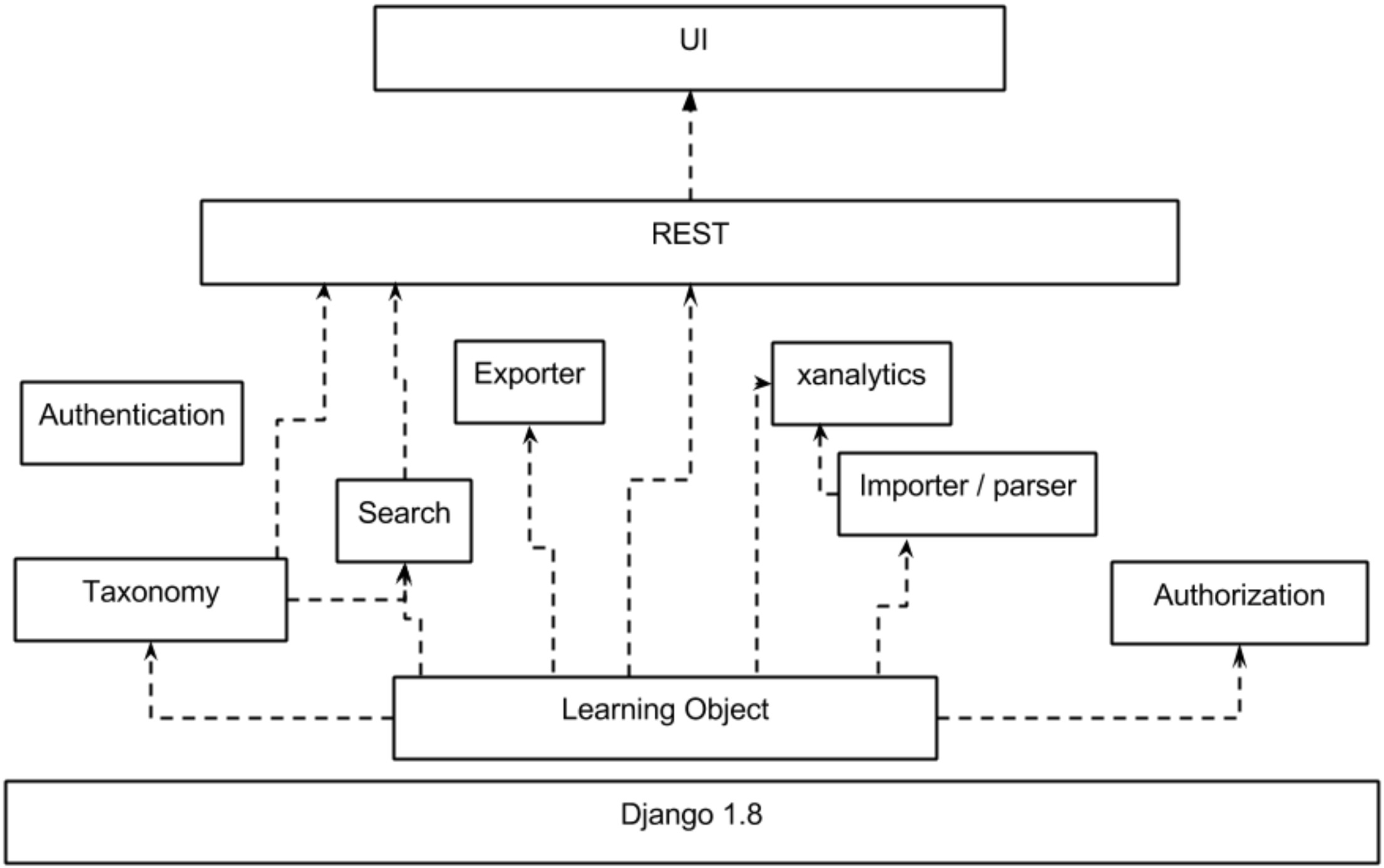
Components & Connectors



Modules view



Technology

LORE is built based on a full stack of open source tools and technologies.

- Docker
- Django, Python, Postgres
- Elasticsearch
- Celery, Redis
- Bootstrap, Reactjs, Bower, Requirejs

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Demo

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What's next ?

- Unique identifier for Learning Objects
- Versioning of Learning Object
- Preserve Metadata during import export
- Better integration with edx / Openedx

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Credits and Acknowledgments

- Office of Digital Learning (ODL) at MIT
- Engineering Team at ODL
  - Brandon DeRosier, Giovanni Di Milia, Jamie Folsom, Carson Gee, Jamie Folsom, Shawn Milochick, Peter Pinch, Amir Qayyum, Peter Wilkins
- Physics Department at MIT
- edX team

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