


Math Faculty True Stories:

Making the Shift to OER and Lumen OHM

“02072015 - Teach to Lead - Boston - Saturday 212” ([goo.gl/46gXCD](https://www.google.com/url?sa=t&url=https://www.youtube.com/watch?v=46gXCD)) by US Department of Education is licensed under CC By 2.0 / color overlay on original



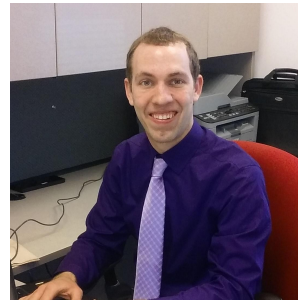
Presenters



Deborah Hur,
Lumen Learning



Peter Shapiro
Florida State College Jacksonville



Matthew Simmons
Florida State College Jacksonville



Dan Daly,
Southeast Missouri State
University



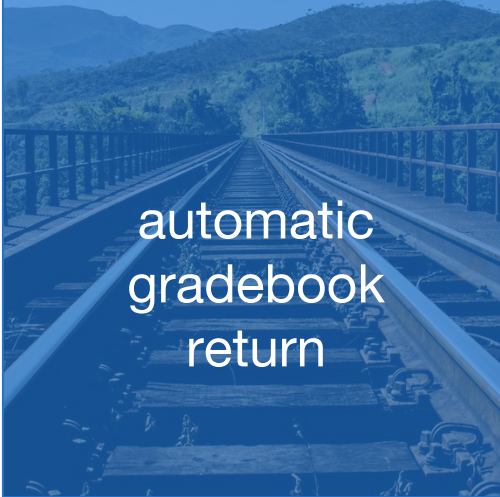
Ann Schnurbusch,
Southeast Missouri State
University

OHM offers:



A complete OER
solution for math

flexible
reliable
simple to adopt



Day one access
in your LMS

automatic
gradebook
return



A fraction of the
cost of traditional
publishers

standard pricing:
\$25/enrolled
student

Applications of the Derivative

Questions

- ▶ Q.1 (0/1)
- ▶ Q.2 (0/1)
- ▶ Q.3 (0/1)
- ▶ Q.4 (0/1)
- ▶ Q.5 (0/1)
- ▶ Q.6 (0/1)
- ▶ Q.7 (0/1)
- ▶ Q.8 (0/1)
- ▶ Q.9 (0/1)

Grade: 0/9

[Print Version](#)

A piece of cardboard measuring 10 inches by 8 inches is formed into an open-top box by cutting squares with side length x from each corner and folding up the sides.

Find a formula for the volume of the box in terms of x

$V(x) =$

Find the value for x that will maximize the volume

$x =$ Preview

Get help: [Video](#)

Points possible: 1
This is attempt 1 of 2.

MathQuill ✕

Basic Functions Trig

$\frac{\square}{\square}$ x^\square x_\square $\sqrt{\square}$ $\sqrt[n]{\square}$ $|\square|$ (\square) π ∞ DNE

$x(10 - 2x)(8 - 2x)$

← ↑ ↓ → ✕

Question ID: 16206
[License](#)
[Report Problem](#)

Online Homework System

Large bank of teacher-created questions

Many question types

Algorithmically-generated problems

Assignment 3.2: Quadratic Functions

Questions

- ▶ Q.1 (0/10)
- ▶ Q.2 (0/10)
- ▶ Q.3 (0/10)
- ▶ Q.4 (0/10)
- ▶ Q.5 (0/10)
- ▶ Q.6 (0/10)
- ▶ Q.7 (0/10)
- ▶ Q.8 (0/10)
- ▶ Q.9 (0/10)
- ▶ Q.10 (0/10)
- ▶ Q.11 (0/10)
- ▶ Q.12 (0/10)
- ▶ Q.13 (0/10)
- ▶ Q.14 (0/10)
- ▶ Q.15 (0/10)

Grade: 0/150

[Print Version](#)

Consider the parabola given by the equation: $f(x) = 2x^2 - 8x - 13$

Find the following for this parabola:

A) The vertex: Preview

B) The vertical intercept is the point

C) Find the coordinates of the two x -intercepts

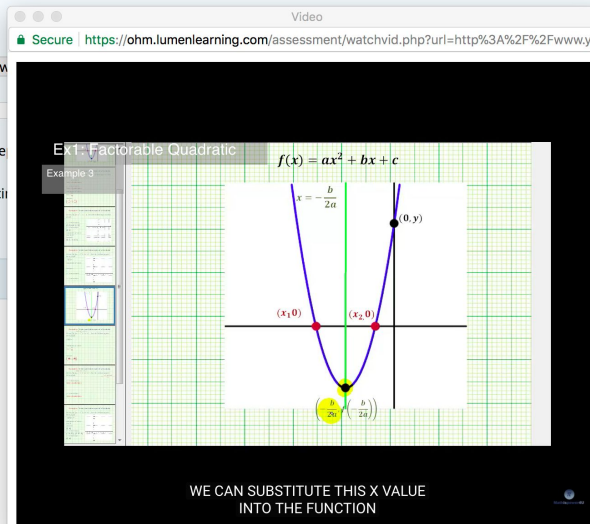
Preview

It is OK to round your value(s) to two decimal places.

Get help: [Video](#) [Video](#)

Points possible: 10

This is attempt 1 of 5.



Enriched OER Content

Instructional text (incl. editable text options)

Video lessons and tutorials

Huge, teacher-created question bank

Possible to include hints, directed feedback

Question Libraries	Number of Questions
Arithmetic/Pre-Algebra	3,200+
Algebra	10,400+
Trigonometry	2,600+
Calculus	3,100+
Differential Equations	580+
Math for Liberal Arts / Quantitative Reasoning	990+
Linear Algebra	190+
History of Math	260+
Statistics	2,800+

Supported Question Types

number, calculated number, multiple choice, multiple answer, matching, function, string, essay, drawing, N-tuple, calculated N-tuple, numerical matrix, calculated matrix, interval, calculated interval, complex, calculated complex, file upload, multi-part, conditional

Announcements

LT Home > Assessment

Assignments

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Commons

OER Courses

Help

Assignment 1.4: Functions

Questions

- ▶ Q.1 (0/10)
- ▶ Q.2 (0/10)
- ▶ Q.3 (0/10)
- ▶ Q.4 (0/10)
- ▶ Q.5 (0/10)
- ▶ Q.6 (0/10)
- ▶ Q.7 (0/10)
- ▶ Q.8 (0/10)
- ▶ Q.9 (0/10)
- ▶ **Q.10 (0/10)**
- ▶ Q.11 (0/10)
- ▶ Q.12 (0/10)
- ▶ Q.13 (0/10)
- ▶ Q.14 (0/10)
- ▶ Q.15 (0/10)
- ▶ Q.16 (0/10)
- ▶ Q.17 (0/10)
- ▶ Q.18 (0/10)
- ▶ Q.19 (0/10)
- ▶ Q.20 (0/10)

Grade: 0/200

[Print Version](#)

Let $g(s)$ be the function $\frac{s}{s+1} - 1$. Find the following:

$g(2) =$ [Preview](#)

$g(-4) =$ [Preview](#)

$g\left(\frac{1}{11}\right) =$ [Preview](#)

$g\left(-\frac{1}{5}\right) =$ [Preview](#)

In each box, enter your answer as an integer or reduced fraction. Enter DNE for Does Not Exist, or ∞ for Infinity.

Get help: [Video](#) [Video](#)

Points possible: 10
This is attempt 1 of 2.

[License](#)
[Report Problems](#)

[Submit](#)

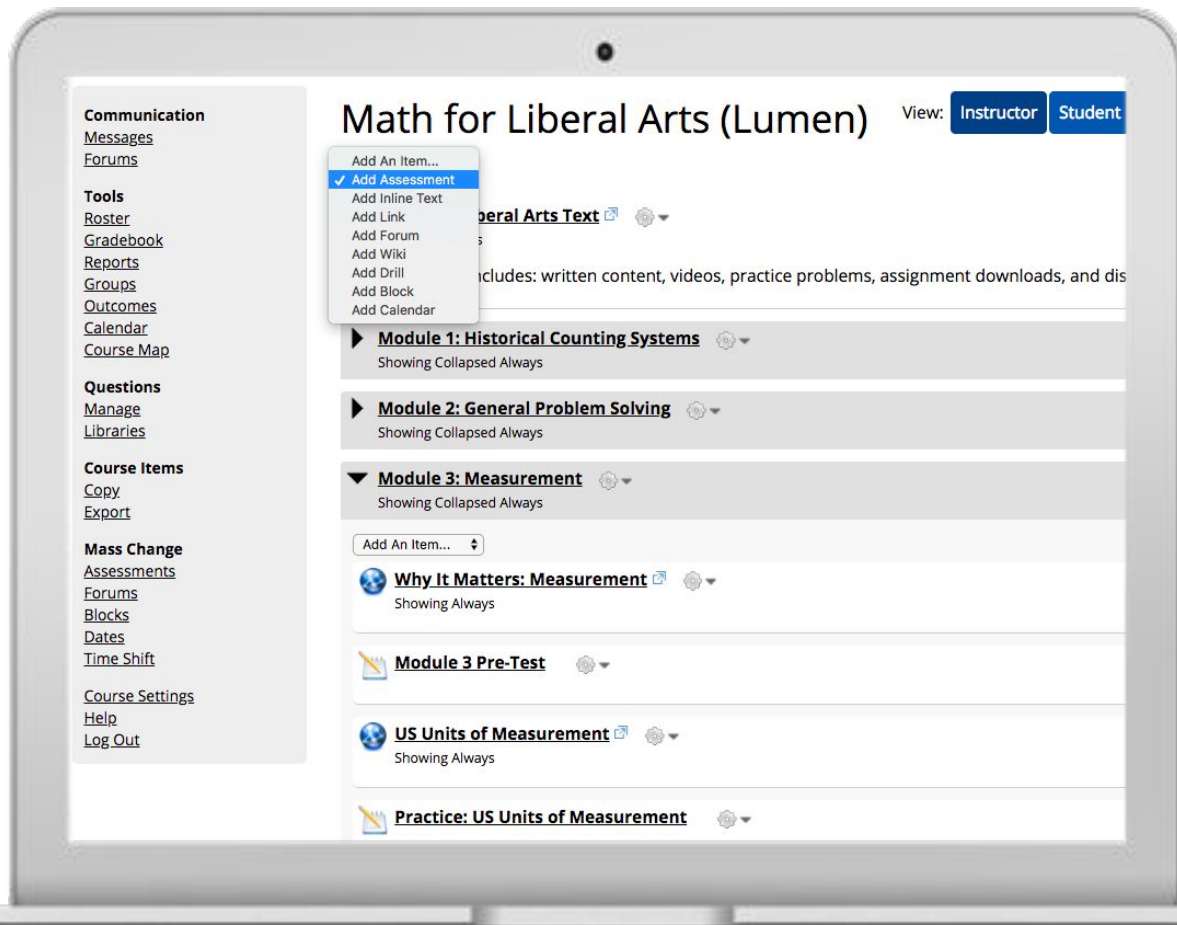
Seamless LMS Integration

Easy set-up

Single sign-on

Automatic grade return

Supported systems:
Blackboard, Canvas,
D2L Brightspace,
Moodle

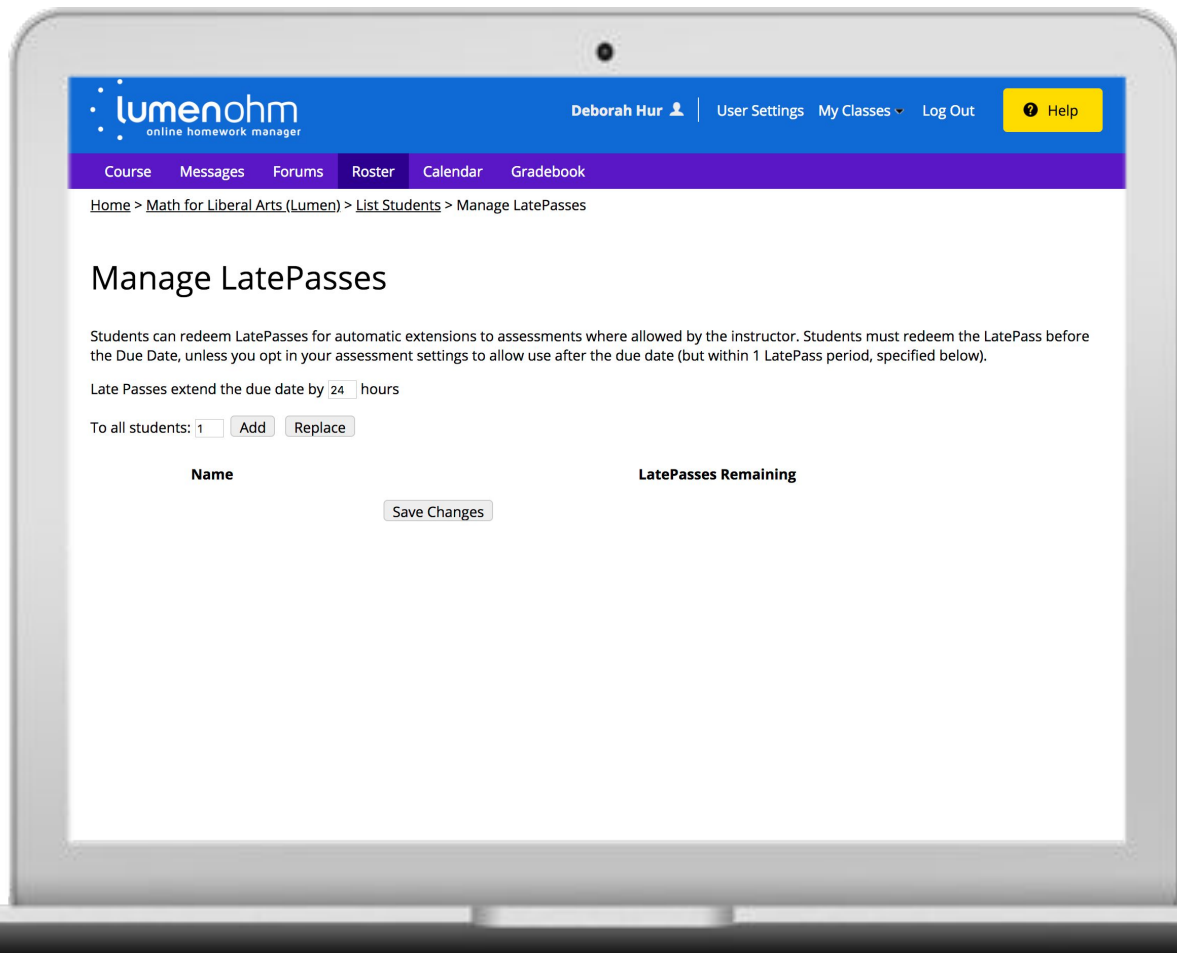


Customizable Course Design

Curated courses make an easy starting point

Customize activities, questions, assessments

Align to fit learning outcomes, term length, student needs, etc.



Teacher-requested Bells & Whistles

LatePass option for assignments

Easy time shift to mass-update assessments

Time exception multiplier

A Newton's cradle with five silver spheres hanging from a metal frame. A person's hands are visible, interacting with the spheres. The background is a blurred wooden surface.

Teaching OER Math with Lumen OHM

OER online homework platform

True Stories:

Southeast Missouri State University



Dan Daly
Interim Chairperson and
Associate Professor



Ann Schnurbusch,
Mathematics Instructor

Who We Are



Southeast Missouri State University (SEMO) is a comprehensive regional university serving a diverse student population of approximately 11,000 students.

Transition to OHM: Fall 2018

Courses using OHM currently: 7

Enrollments in OHM: 2,200
(including math labs and dual enrollment students)

semo.edu



Problems addressed using OHM?

1. Expense for students. Previous system cost \$130-180 per student after bookstore markup.
2. Access to materials. Previous system had an ebook which was only available through the system.
3. Stability of system. Previous system was down during the first week of the semester for many semesters (particularly bad in fall 2016).
4. Integration with LMS. Previous system could not integrate with our LMS.

Switching from previous course materials

- Limited textbooks available, but more flexibility with what you do with the textbook.
- Problems chosen from a general list of problems that do not specifically coordinate with the textbook.
- Important to work through each problem before assigning to students.
- Developed courses during summer for all instructors to teach. Smoother transition if courses were piloted by limited instructors first.
- Once instructors have imported the course, any changes must be made by each instructor in each course.

What do faculty and students like about OHM?

- Flexibility in resources and assignments.
 - Variety of resources from a variety of sources.
 - Textbook materials can be added/deleted/rearranged.
 - Easy to manage from instructor side.
- Seamless incorporation into LMS
 - One login for students with all materials in one location.
 - Grades automatically imported into LMS.
 - Using OHM is intuitive, time not spent on instructing students in product use.
- Saves money

Customer Support

- In-person help was available before the course began.
- Very responsive, replies within 24 hours.
- Option to directly contact author of questions.

Advice to others considering OER

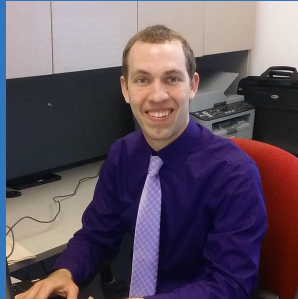
- Spend time exploring available OER textbooks and Lumen OHM product before making a decision.
- Be sure to work each problem before assigning to students.

True Stories:

Florida State College at Jacksonville



Dr. Peter Shapiro,
Director, Creative Learning
Services



Matthew Simmons,
Professor

Who We Are

Florida State College at Jacksonville (FSCJ) is in Jacksonville, Florida. It is designated as a State College within the Florida College System, and has four major physical campuses. FSCJ serves 50,000 students.



Florida State College
at Jacksonville

FSCJ has been using OHM since 2016. In 2018, in their online program alone, they have over 1,200 math enrollments across 4 different math courses.

ATD OER Degree Initiative Grantee

2017-2018 approximate
textbook cost savings
was @ \$400,000

fscj.edu



Our Story

- What problems were you hoping to address when you started teaching with OHM?
- What was it like switching from previous course materials?
- What do you like about the OHM?
- How is OHM working for your faculty and students?
- What's been your experience with Lumen's customer support?
- What advice do you have for others considering OER for math?



Questions?

How to Learn More

Explore Lumen OHM

1. Look for email link to webinar recording, slides
2. Explore OHM:
 - Visit Lumen OHM at ohm.lumenlearning.com
 - Request a [Lumen OHM instructor account](#)
 - Contact your Follett store manager
 - Email info@lumenlearning.com

Thank you.



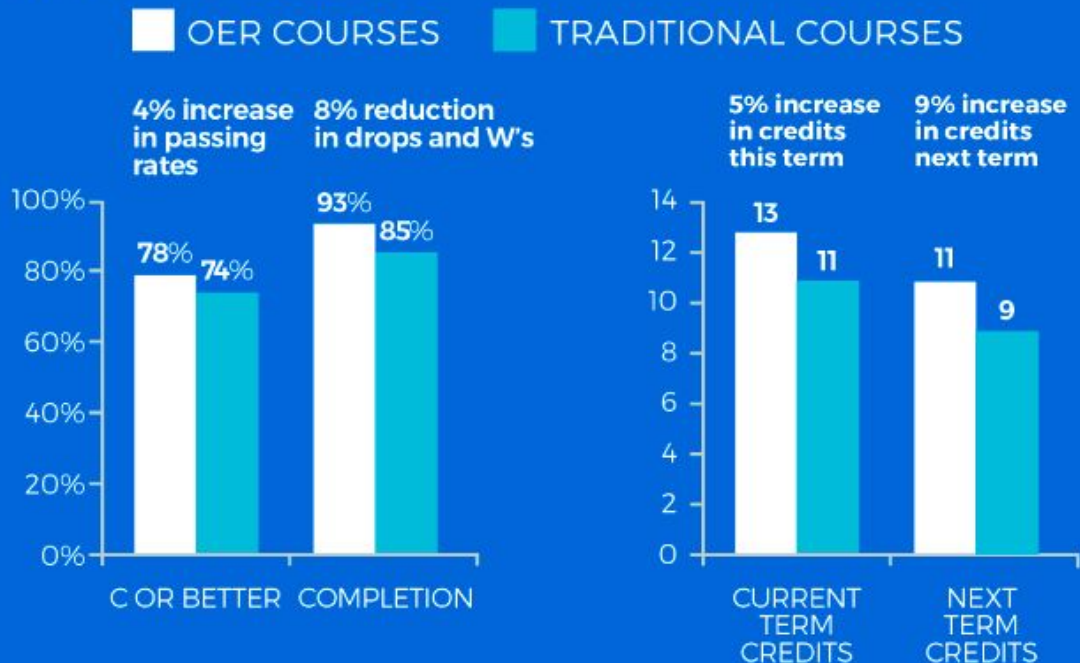
Leaders in learning innovation choose Lumen



Lumen OER improves student success.

Students perform as well or better in sections using OER.

RESEARCH: LUMEN OER IMPROVES PASSING RATES IN MULTIPLE SUBJECTS



SAMPLE: 4,909 open course students, 11,818 traditional course students, 50 different undergraduate courses, 130 teachers, 8 institutions in 2014-2015 academic year.

METHOD: Quasi-experimental design with: Propensity Score Matching, Post Test Only.

DEPENDENT VARIABLES: Completion; C or Better; Credits Enrolled This Term; Next Term. Independent variable: Textbook condition, 3 covariates: including age, gender, and race.

SOURCE: Published in the Journal of Computing in Higher Education <https://link.springer.com/article/10.1007/s12528-015-9101-x/fulltext.html>

Key Features	Lumen OHM	MyOpen Math	MyLabs	Web Assign
Low cost: ≤\$25 for text+online homework	✓	✓		
Create and customize OER content	✓	✓	(✓)	(✓)
Robust system with algorithmic assessments	✓	✓	✓	✓
Faculty support: Onboarding, training, help	✓		✓	✓
Supported LMS integration with grade return	✓		✓	✓
Professionally maintained enterprise solution	✓		✓	✓
Admin & support for wide-scale adoption	✓		✓	✓
Maintain your own version control	✓	✓		
Curated, customizable template courses	✓	(✓)	✓	✓
Easy peer-to-peer sharing of courses, assessments, content, innovation	✓	✓		

What about accessibility?

Meeting the needs of learners with variable strengths

Aim: Design all courseware to adhere to WCAG 2.0 Level AA Success Criteria

Standard design features in Lumen-recommended courses:

- Screen reader compatible
- Alt-text for every image
- Quality captioning and transcripts for every video or multimedia piece
- Text alternatives for interactives and simulations
- Mobile device friendly
- Responsive to browser user-controls for color, text size, display options, accessibility plug-ins

Lumen OHM Course List

Discipline	Course	Discipline	Course
Math	Arithmetic	Math	College Algebra
	Prealgebra		Trigonometry
	Elementary Algebra		Precalculus
	Intermediate Algebra		Calculus
	Math for Liberal Arts / Quantitative Reasoning	Statistics	Introductory Statistics
	Finite Math		Chemistry for Majors
		Natural Science	

Lumen OHM Recommended Course List - Math

Subject	Static OER Text	Editable OER Text
Arithmetic	✓	
Prealgebra	✓	✓
Beginning Algebra	✓	✓
Intermediate Algebra	✓	✓
Finite Math	✓	✓
College Algebra/Pre-Calculus I	✓	✓
Trigonometry/Pre-Calculus II	✓	✓
Math for Liberal Arts/ Quantitative Reasoning	✓	✓
Introductory Statistics	✓	✓

OHM Pricing & Payment Options

Payment Model	Standard pricing per student using OHM
Course Fee (collected by institution, per enrollment)	\$25
Direct-to-Lumen Payment (collected by Lumen, per enrollment)	\$25
Bookstore Activation Code (per enrollment)	\$25*
Follett includED (streamlines course fee)	\$25
Annualized Fee (per institution, pre-paid)	Negotiated based on current and projected usage

**Campus stores may add additional markup; this is left to discretion of institutions*

Pricing & Payment Options

	Waymaker	OHM	Candela
Course Fee (collected by institution, per enrollment)	\$25	\$25	\$10
Direct-to-Lumen Payment (collected by Lumen, per enrollment)	\$25	\$25	NA
Bookstore Activation Code (per enrollment)	\$25*	\$25*	NA
Follett IncludED (streamlines course fee)	\$25	\$25	\$10
Annualized Fee (per institution, pre-paid)	Negotiated based on projected usage		
	✓	✓	✓

**Campus stores may add additional markup; this is left to discretion of institutions*

Compare Payment Options

Payment Considerations	Course Materials Fee	Direct-to-Lumen Payment	Activation Code	Follett IncludED	Annualized Fee
Standard Pricing: Waymaker/OHM/Candela	\$25/\$25/\$10	\$25/\$25/NA	\$25/\$25/NA	\$25/\$25/\$10	Contact us
Zero added cost to students					✓
Payment collected from student by:	Institution	Lumen	Bookstore	Bookstore	NA
Pay via financial aid	✓		✓	✓	NA
Add surcharge to fund OER / teaching & learning innovation	✓	✓	✓	✓	
Unlimited access to learning content from day 1	✓	✓	✓	✓	✓
Graded quizzes, assessments blocked until payment received		✓	✓		

Adopting a Lumen OHM Math Course

Step 1: Explore	Step 2: Adopt	Step 3: Teach
Get instructor account Explore course materials Try out course-building	Train Configure & customize Integrate LMS Select payment model	Enroll students Teach Collect feedback Analyze data Improve

Lumen Course Catalog

Openly-licensed
course materials.

High-enrollment
college subjects.

[Visit catalog.](#)

COURSE CATALOG

Q Search Course Titles and Descriptions

All Subjects

All Products



American Government

Candela



American Literature

Candela



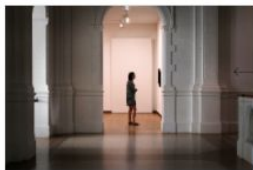
Anatomy and Physiology

Candela



Arithmetic

OHM



Art Appreciation

Candela



Basic Reading and Writing

Waymaker Candela



Beginning Algebra

Waymaker OHM



Biology for Majors

Waymaker Candela



Biology for Non-Majors

Waymaker Candela



Biology Laboratory Manuals

Candela



Chemistry for Majors

OHM Candela



Chemistry Laboratory
Manuals

OHM