SMART, LOW-COST
OER SOLUTIONS
FOR MATH

lumenohm
online homework manager

OVERVIEW

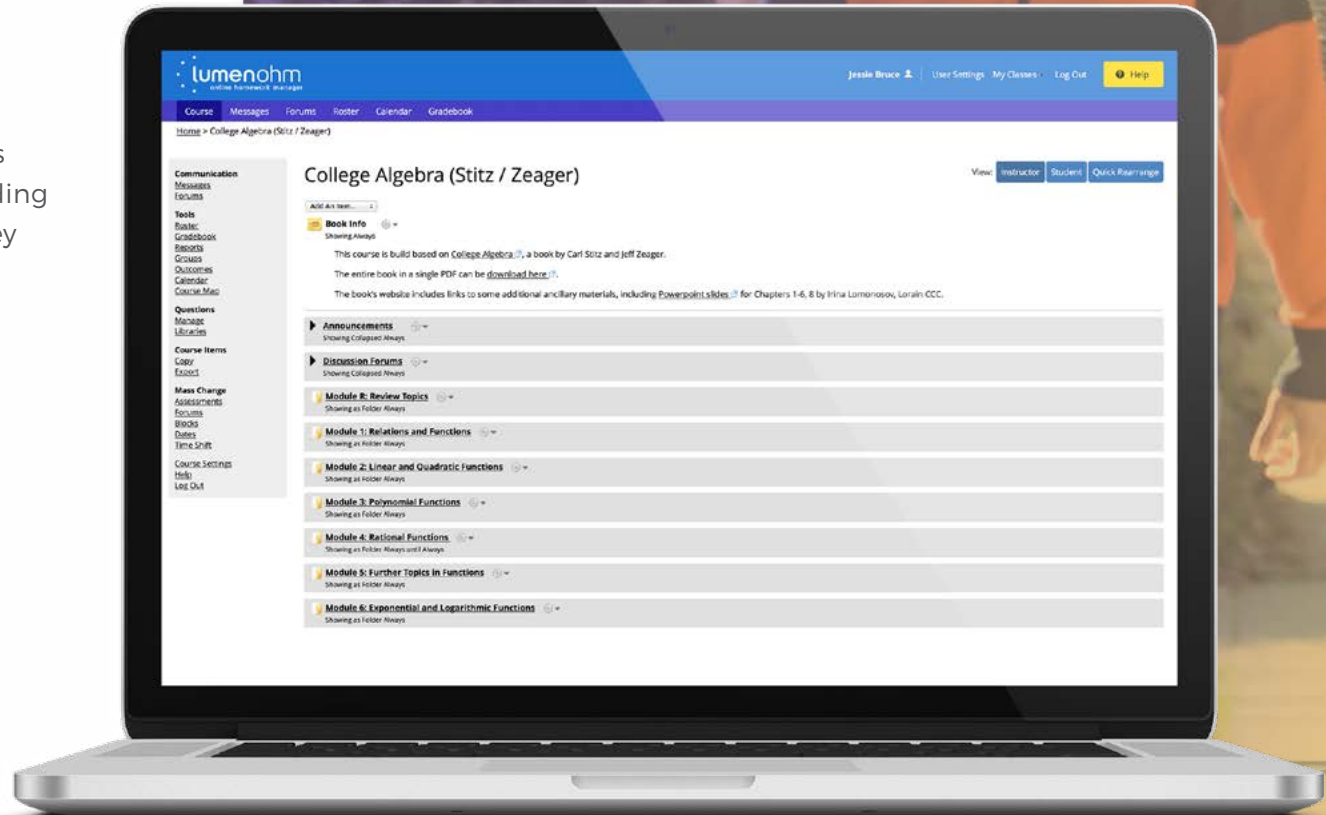lumen ◇ Follett

LUMEN OHM: POWERFUL OER FOR MATH

Lumen Online Homework Manager (OHM) is a robust online math homework engine and course-building platform. Developed using open educational resources (OER), OHM offers the combination of rich OER content and tremendous flexibility to customize course materials to fit your needs.

As an OER-based solution, OHM is extremely affordable, while providing students the rigorous practice they need to master math and other quantitative subjects.

WHY OER?

Open educational resources are learning materials licensed to permit their free use and repurposing by others. OER offer significant advantages over traditional textbooks:

AFFORDABILITY: dramatically cheaper than traditional publisher alternatives

EFFECTIVENESS: students perform as well or better using OER compared to non-OER alternatives

CONTROL: faculty can exercise greater academic ownership over curriculum and easily make timely updates and improvements
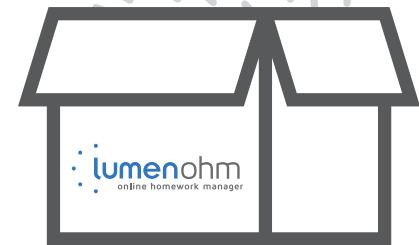
ACCESS: students may retain access to OER learning materials forever

COMPLETE COURSE BUNDLES

Lumen OHM offers complete course bundles for high-enrollment math courses. It brings together OER textbooks, videos, online algorithmically generated and graded problem sets, quizzes, and other materials. You may mix and match open course materials from different sources, and they come together in a single package for students.

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LARGE, RICH QUESTION LIBRARY

When you use OHM, you draw from a vast, continually improving collection of teacher-created questions to help students master math and other quantitative skills. OHM supports twenty different question types with the ability to use randomly generated numeric and string arguments. You can also create new questions and contribute them back to the community.

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, Multipart, Conditional

IMPRESSIVELY CUSTOMIZABLE

Lumen OHM offers many options for tailoring Lumen's out-of-the-box course bundles to match your teaching style, term length, and mode of delivery. With editable text for many titles and subjects, OHM's simple-to-use authoring platform supports LaTex for beautiful math display. Tapping into community-created resources, you can easily build and modify a variety of learning activities. OHM's versatile question editor empowers you to create original content that perfectly aligns assessments with course outcomes.
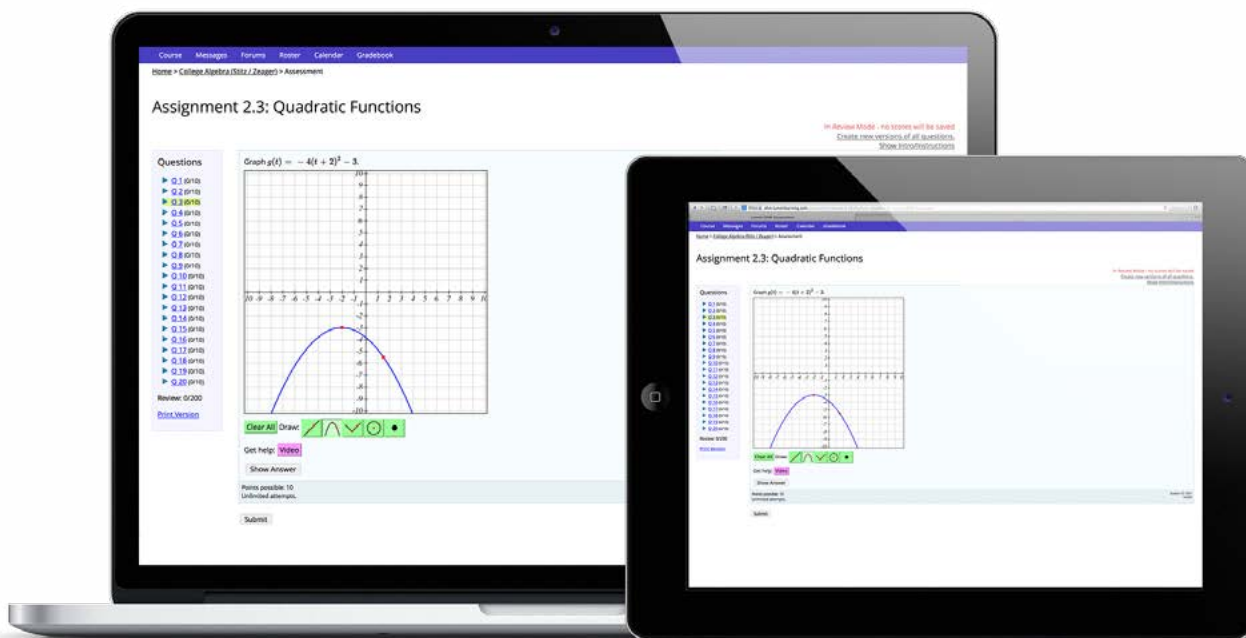
TEACHER-FRIENDLY TOOLS

OHM is designed with smart tools that simplify common tedious tasks and allow teachers to focus on pedagogy, such as:

- Simple term-to-term copying
- Mass editing
- Drag-and-drop reordering for course content
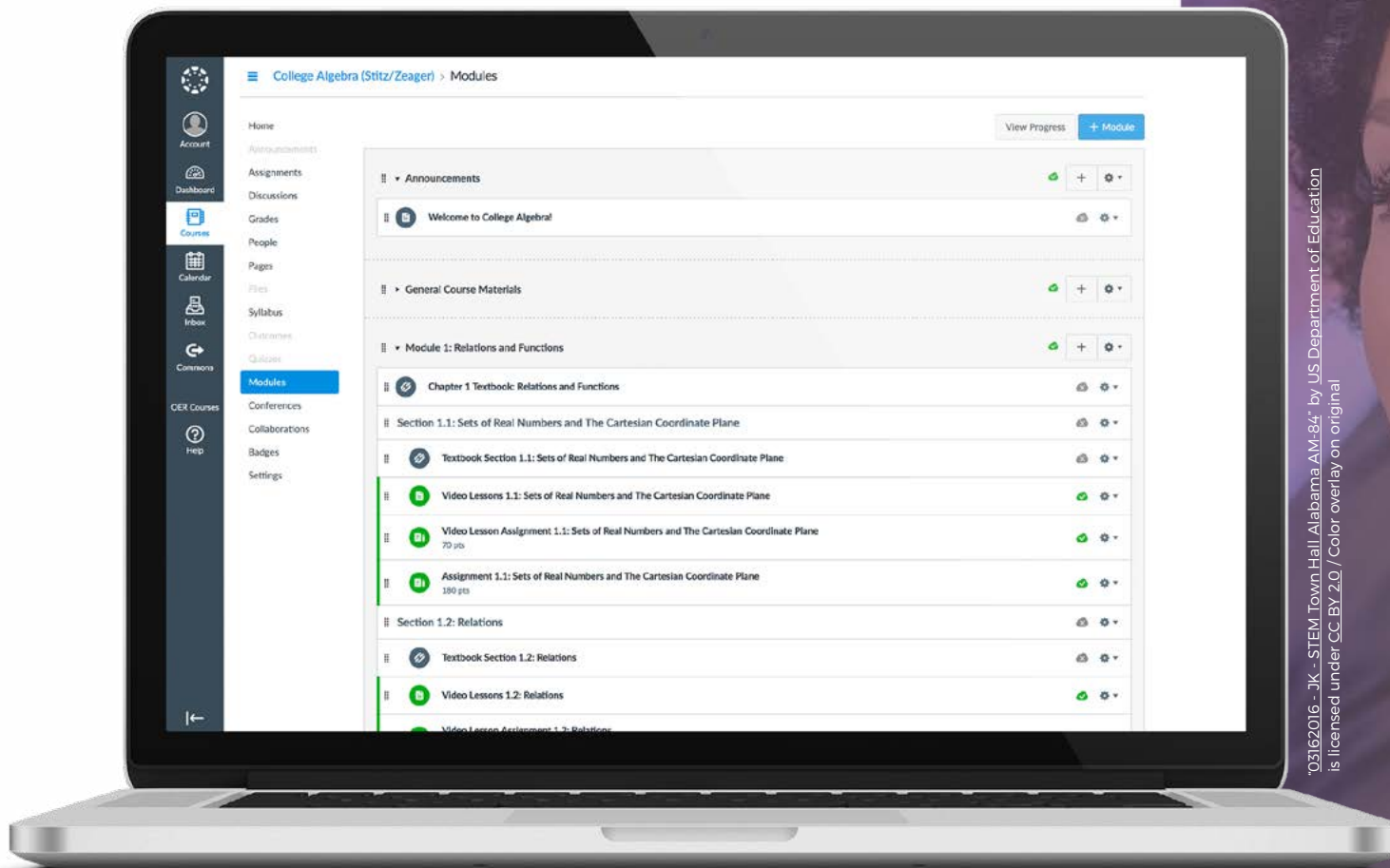- Shift all due dates by a fixed number of days

EFFECTIVE FOR STUDENTS

Regular practice and immediate feedback are critical to help students develop their skills. Lumen OHM provides a simple-to-navigate online environment with complete course materials in one place. Students can use OHM on computer, tablet, or smartphone.

GREAT LMS COMPATIBILITY

OHM works seamlessly with Blackboard, Canvas, D2L Brightspace, and other LTI-compliant learning management systems. Every student enjoys single sign-on, day one access, and every instructor appreciates automatic grade return.
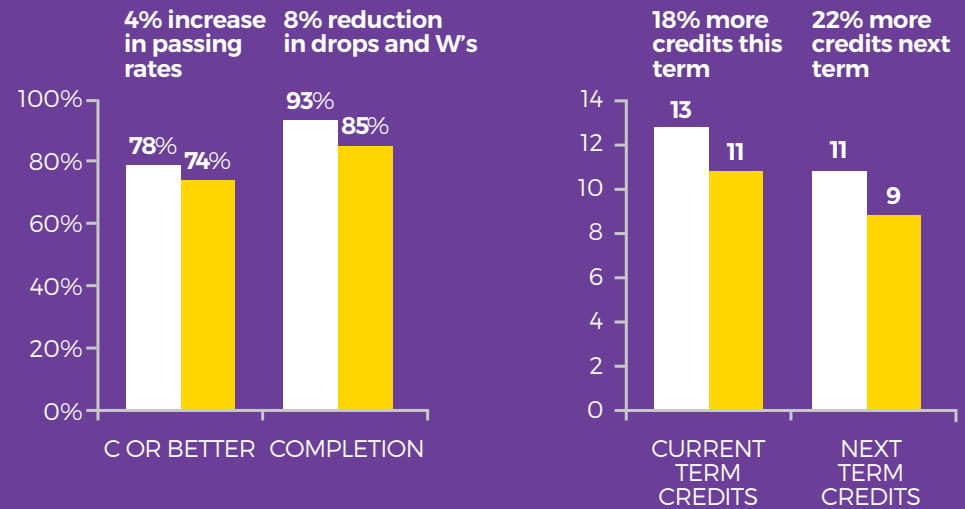
SUCCESSFUL STUDENT OUTCOMES

Lumen OHM supports thousands of students and faculty every term, offering an affordable and well-supported solution for math education. Academic research confirms students in Lumen-supported OER courses perform as well or better than their peers in non-OER courses.

RESEARCH: LUMEN OER IMPROVES PASSING RATES

OER COURSES   **TRADITIONAL COURSES**

4% increase in passing rates   **8% reduction in drops and W's**

	C OR BETTER	COMPLETION
OER	78%	93%
Traditional	74%	85%

18% more credits this term   **22% more credits next term**

	CURRENT TERM CREDITS	NEXT TERM CREDITS
OER	13	11
Traditional	11	9

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

LEARN MORE

Find Lumen OHM at ohm.lumenlearning.com, where you can request a free account to try it out. Find more information, download a course list, or request a demo at lumenlearning.com/what/ohm/.

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