



MATLAB Campus-Wide License MATHWORKS LICENSING FOR CAMPUS-WIDE USE



Prepared for





Campus-Wide License at a Glance

The MATLAB Enabled Campus | Anytime, Anywhere Access for Everyone

- Includes all faculty, researchers, and students; unlimited access
- Access at home and in the classroom, in lab and field research, and off-network
- Installation on campus-owned machines, as well as faculty and student-owned computers
- Full configuration includes over 90 products
- MATLAB Academic On-line Training Suite library provides cost-effective training for all
- Makes entire school legally license compliant; removes liability for software piracy
- ML On-line, ML Mobile, ML Grader and ML Courseware, are free features included with TAH license; not available with traditional concurrent and classroom licensing

Campus-Wide License Features



- Available to all faculty, researchers, and students everywhere: at home and classroom, in lab and field research, and while travelling for academic and educational use.
- Covers all on-campus computing facilities, labs, classrooms, and research centers, as well as all faculty-owned and student-owned personal computers.
- Expandable with more than 90 products.
- Annual expense provides more predictable cost model for budget planning.
- One license eases license management and ensures software license compliance through central administration. Easily integrates into bring your own device (BYOD) programs.
- Pricing is proportional to the size of the student body and number of products licensed, which provides cost efficiencies per user.



Worldwide Universities and MathWorks

Over 5,000 Universities worldwide use MATLAB including all of the top 200. Over 1,000 universities have upgraded their MATLAB access to a Campus-Wide license. This includes the 25 top-ranked technical universities. Below a sample of Universities who choose the MATLAB Campus Wide license.

































Using MATLAB and Simulink to Prepare Students for the Workplace

Many of the 5,000 universities that use MATLAB and Simulink use a carefully planned technology-integrated curriculum to help prepare students for careers in engineering and science. Leading universities worldwide follow these best practices:

Provide all first-year students with a solid grounding in applying tools they will reuse.

- "We heard over and over how pleased [the students] were to have learned MATLAB in their first year."
- Dr. Stormy Attaway, Boston University [Read article]

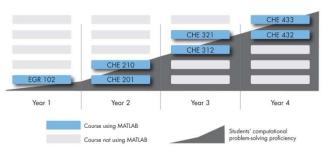
Coordinate tool use throughout an entire department's curriculum.

"Our environment of choice for problem-solving at the undergraduate level is MATLAB. We selected MATLAB because it is suitable for a broad range of problems and because it is becoming the de facto standard in many university engineering programs, reflecting the increasing use of MATLAB in industry."

- Dr. Jon Sticklen, Michigan State University [Read article]

Thoroughly integrate a common tool set throughout curricula for all applicable departments.

"Our vision is to attract and develop passionate engineering students who are well-equipped to make a difference in the world. That vision includes MATLAB integration throughout the entire engineering curriculum. This will enable a holistic teaching-and-learning approach where students can readily



transfer skills within their coursework and beyond, into industry."

– Dr. Satish Udpa, Dean of the College of Engineering, Michigan State University [Read article]

Ensure reuse of technical computing concepts and tools across multiple courses.

"With MATLAB, we are combining computer science theory and concepts with problem solving in engineering. MATLAB is the one language that we want our students to use — the one that we all use in our classrooms."

- Dr. James Craig, Georgia Institute of Technology [Read article]

"We can engage students in leadingedge research. The tools enable the research group and the student including biology majors and engineers—to focus on research and spend less time programming."

Dr. Gil Alterovitz, MIT and Harvard University



MathWorks and MultiON Support and Resources at UNAM

As a company whose foundation is rooted in academia, MathWorks is committed to enabling and supporting a positive user experience at UNAM.

MathWorks Support for Project-based Learning (Problem-based or Active Learning)

Project-based learning uses active learning techniques and gives students direct exposure to hardware and software. By extending the approach to incorporate industry-standard software such as MATLAB and Simulink, instructors not only keep students motivated but also prepare them for a range of careers. Simulink enables these goals with built-in support for interfacing with low-cost hardware, including Arduino®, BeagleBoard, and LEGO® MINDSTORMS® NXT platforms. This built-in support is also available in MATLAB and Simulink Student Version. [Read article]

"With the university's TAH license, students are free to use MathWorks tools to collaborate and to work on assignments or research projects almost anywhere. The faculty has more flexibility in developing courses because they know students can use the tools on their own laptops, rather than competing for limited lab space."

Jan Maschuw,
 RWTH Aachen University

MathWorks Online Support

MathWorks is committed to providing expert technical and customer support to the UNAM user community. In addition to live support coverage, MathWorks provides 24x7 web-based help at http://www.mathworks.com/support.

The following online resources to learn, teach, and research with MATLAB and Simulink are recommended for the user community at UNAM:

Web Resource	Location	
Classroom resources—links to videos, models, slides, and code	mathworks.com/academia/classroom-resources	
MATLAB and Simulink interactive video tutorials	mathworks.com/tutorials	
MATLAB and Simulink based books	mathworks.com/books	
MATLAB Central online user community	mathworks.com/matlabcentral	
User stories	mathworks.com/userstories	
On-demand webinars	mathworks.com/academia/webinars	
Student competitions	mathworks.com/academia/student-competitions	
Hardware for project-based learning	mathworks.com/academia/hardware-resources	



MATLAB Courseware

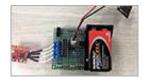
MATLAB courseware consists of downloadable sets of curriculum materials for educators based on MATLAB and Simulink. These materials help you develop and enhance curriculum, facilitate lectures and classroom examples, and inspire student learning. *Only available for TAH customers.

First-Year Courseware



Discovery-Based Learning

Professor Steve McKnight Professor Gilead Tadmor Northeastern University



Engineering Problem Solving

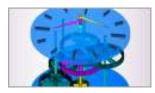
Professor Stanley Hsu Professor Rajeevan Amirtharajah Professor Andre Knoesen University of California, Davis



Engineering Models I

Professor Kathleen Ossman Professor Gregory Bucks,

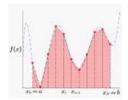
University of Cincinnati



Engineering Models II

Professor Kathleen Ossman Professor Gregory Bucks,

University of Cincinnati



Introduction to Engineering Analysis

Professor Ivan V. Bajic Professor Fabio Campi et al. Simon Fraser University



Introduction to MATLAB

Professor William J. Palm, III University of Rhode Island

For more downloadable MATLAB courseware sets of curriculum materials visit MATLAB Courseware webpage. For more course materials visit Classroom Resources or view more than 1500 books based on MATLAB and Simulink.



Grade MATLAB programming assignments automatically

Cody Coursework lets you create MATLAB programming assignments for students and automatically grade their work. It also provides students with immediate feedback when they solve problems to improve engagement and learning outcomes. Using the Solution Map before each lecture, you can see patterns in student solutions and quickly address gaps in understanding. You can also download scoring data as input into your course grading rubric.



Cody Coursework Overview

Cody Coursework is a hosted product to help faculty automate the grading of MATLAB programming assignments.

MATLAB Grader (Cody Coursework)

Create your own MATLAB programming assignments using Cody Coursework.

Key Features

- Visual environment for creating MATLAB problem sets for students to solve by writing MATLAB scripts or functions
- Automated grading based on test suites that can be visible or hidden to students
- Autograde-ready MATLAB programming problems available for getting started
- Learning informatics tools such as the <u>Solution Map</u> for assessing class progress and guiding lectures

Using Cody Coursework

- 1. Log in at http://coursework.mathworks.com
- 2. Create your own courses of MATLAB programming assignments.
- 3. Invite students by email. (Students do not need access to MATLAB.)
- 4. Monitor student progress.
- 5. Download scoring data and privately implement grading rubric (via a spreadsheet, MATLAB script, or learning management system such as Moodle, Sakaj, and Blackboard)



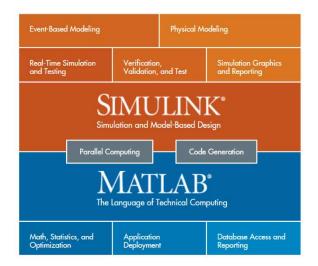


MathWorks Product Overview

We produce nearly 100 products in the MATLAB and Simulink product families for technical computing and Model-Based Design.

We offer solution suitable, but not limited to Engineering, Math Physics, Life Science, and Economics for application such as:

- Control Systems
- Signal Processing and Communication
- Image Processing and Computer Vision
- Test and Measurement
- Computational Finance
- Computational Biology

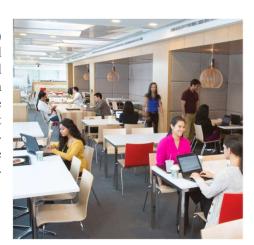


Services

MATLAB Academic Online Training Suite (MAOTS)

Exclusive Training Offer for MATLAB Enabled Campuses

To support users of the Total Academic Headcount (TAH) license, MathWorks offers campus-wide access to self-paced courses online. Providing training for faculty, researchers, and students on the tools required to do their work can be a burden on university resources. MAOTS helps universities introduce industry-standard tools into curriculum, as well as support flipped classrooms and distance learning initiatives. Campus-wide training gives visibility to MATLAB features that can be used in many fields to increase productivity, support multi-disciplinary projects, and enhance student skills.



Benefits of Self-Paced Training with MATLAB

Faculty and Researchers



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- Sharpen skills and focus on relevant topics
- Increase productivity and collaboration by learning features designed to save time and share
- Integrate industry-standard tools into courses without sacrificing valuable class time
- Enable teaching assistants to facilitate training sessions for undergraduate students using professional training materials

Students

- Develop programming skills
- Learn industry-standard skills for an edge in job searches

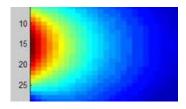
All Participants

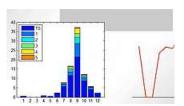
- Access content that is continuously updated and always available anytime, anywhere with an Internet connection
- Get real-time help with online discussion boards and live chats with trainers
- Monitor progress and print a certificate of completion for each course
- Revisit the content as many times as needed during the license period

Online courses provide a comprehensive introduction to the MATLAB technical computing environment. MATLAB competency is developed in a natural way, with an emphasis on practical application. This prerecorded, interactive format includes demonstrations, exercises, and quizzes that MATLAB users complete at their own pace. Themes of data analysis, visualization, modeling, and programming are explored throughout four online courses.

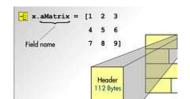
Topics include:

- Working with the MATLAB user interface and code development tools
- Entering commands and creating variables
- Performing analysis on vectors and matrices
- Visualizing vector and matrix data
- Creating custom visualizations and animations
- Automating analysis and modeling tasks with scripts and functions









- Using and creating classes and objects
- Working with data files
- Structuring data and organizing code

Visit https://www.mathworks.com/products/campus-wide-training.html for more information.

Course	Duration	Access
MATLAB Onramp	2 hours	Free on TAH License
MATLAB Fundamentals	21 hours	
MATLAB Programming Techniques	14 hours	1 year paid access
MATLAB for Data Processing and Visualization	7 hours	
MATLAB for Financial Applications	21 hours	





Instructor-Led Training at Your Facility



Let MathWorks training come to you. Available worldwide, onsite training is ideal for groups of researchers, faculties or those who need customized instruction on MathWorks products. To maximize your productivity with the tools, instructors can tailor the curriculum with University-specific examples, and address challenges and process issues familiar to attendees from your organization.

Topics include:

- Managing large models in Simulink
- Working with MATLAB & Simulink and your HPC facilities
- Testing Simulink models
- Generating C code from MATLAB
- Creating documents from Simulink models
- Calibrating complex powertrain systems
- Modeling and simulating power electronics
- Generating C or HDL code from Simulink models
- Linking requirements and testing Simulink models
- Developing embedded targets
- Proving the absence of run-time errors within C code

Fees: Special price for Academics;



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MATLAB Certification

MATLAB certification establishes a standard of excellence that demonstrates your MATLAB proficiency to customers, industry peers, and your employer. For Universities, certification is a strategic investment that pays off through increased quality of trainers and project success. Besides, it is a great asset for all graduated student who will start careers in engineering and science. For individuals, certification validates proficiency with MATLAB and can help accelerate professional growth.

MATLAB training is strongly recommended to prepare for certification; courses cover all skills tested in the exam. Certification exams are administered in English at MathWorks facilities in North America, Germany, the United Kingdom, China, and Australia.

MathWorks offers two levels of certification:

MathWorks Certified MATLAB Associate, and MathWorks Certified MATLAB Professional.





Fees: Special price for Academics;