

**Getting Started with**  
**MasteringPHYSICS**



MASTERINGPHYSICS IS  
POWERED BY MYCYBERTUTOR  
BY EFFECTIVE EDUCATIONAL TECHNOLOGIES

**STUDENT EDITION**

# Welcome to MasteringPhysics™

**MasteringPhysics** is the first Socratic tutoring system developed specifically for students like you. It is the result of years of detailed studies of how students work physics problems, and where they get stuck and need help. MasteringPhysics is a system with proven educational benefits - studies show students who used MasteringPhysics significantly improved their scores on final exams and the Force Concept Inventory (a conceptual test) when compared with traditional hand-graded homework. MasteringPhysics achieves this by providing you as an individual student with instantaneous feedback specific to your wrong answers at each step in solving a problem, and by providing you with simpler sub-problems and hints when you get stuck. This individualized, 24/7 tutoring makes the system very popular with students — 7 out of 8 students recommend the use of MasteringPhysics to their peers.

***Before you go online to register, take a minute to be sure you have the following items:***

**Valid email address**

If you do not have one yet, contact your school's technology center or set up a free account on a website that offers this service.

Write your email address here: \_\_\_\_\_

Your email address may look like this: *yourname@yourschool.edu*

**Course ID**

Contact your instructor to get the MasteringPhysics Course ID that is unique to your online course. A Course ID looks like this: MPNAME0001

Write the Course ID here: \_\_\_\_\_

**Student ID**

Contact your instructor to get instructions on what Student ID to use. This may be your college ID, the last 4 digits of your social security number, or something else your instructor uses to identify you.

Write your Student ID here: \_\_\_\_\_

**Student Access Code**

This is a six "word" printed code supplied beneath the pull-tab inside your MasteringPhysics Student Access Kit. Each code is valid for a single student only.

If the tab in this kit has been pulled back prior to your using it, the code may no longer be valid. In this case, you can purchase access online using a credit card. To purchase access online, go to <http://www.masteringphysics.com>, click on the appropriate title, and follow the on-screen instructions for an online purchase.

Access codes are non-transferable and look like this:  
NANTW-FORRM-PAPER-BLASE-PENCH-WARMD

## First steps...

You access your MasteringPhysics online course with an Internet connection and a web browser, such as Microsoft® Internet Explorer or Netscape® Navigator.

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# 1 Registering in MasteringPhysics

<b>You can register by simply going to <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>...</b>	Click the appropriate book cover to enter. Click the Register button and then follow the on-screen instructions to register for MasteringPhysics. Instructions are also provided below; your experience may vary slightly.
<b>If your online registration session is interrupted for any reason...</b>	You can always go back and restart. <ul style="list-style-type: none"> <li>Your student access code is valid until you complete the process successfully.</li> <li>For online purchase, your credit card is not charged until you complete registration.</li> </ul>
<b>If you ever need to change any information during registration...</b>	Navigate to the desired page and make your edits. <i>Note To edit account information (such as your email address) after you register, log into MasteringPhysics and click the Personal Information link.</i>
<b>When you register, you both...</b>	<ul style="list-style-type: none"> <li>Create a student account (or identify an existing account from a previous registration)</li> <li>Enroll in an online MasteringPhysics course</li> </ul>

## To register

- Go to [www.masteringphysics.com](http://www.masteringphysics.com).
- Click the appropriate book cover to enter.
- Click the **Register** button for students.
- Click **Next** to register using the student access code located inside the front cover of the student access kit.

-OR-

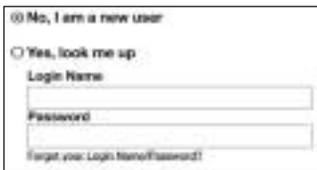
**Purchase access online:** Students who do not have a student access code can use an American Express, MasterCard or VISA card to register and enroll in an online MasteringPhysics course. In this case, click the link to purchase online access and follow the on-screen instructions. Your registration path will differ from the instructions in this booklet. You may buy access online for any book title. Even if you bought a used copy of the text, please select that book’s title to purchase MasteringPhysics.

- (Optional) Click  [Need help?](#) at the top right of the Access Information page to check that your computer has a compatible operating system and browser, along with the appropriate browser settings.

### Do you have a Pearson Education account?

- If so, click **Yes, look me up**. Type your existing login name (or User ID) and password that you have used for other online course materials or websites that accompanied a textbook published by a Pearson Education company, whether Addison-Wesley, Allyn & Bacon, Benjamin Cummings, Longman, or Prentice Hall.
- If not, leave **No, I am a new user** selected. You will create a login name and password later in this process.

 **Note** If you have two accounts for MasteringPhysics, you must create two different Login Names. Select **No, I am a new user**.



### Access Code

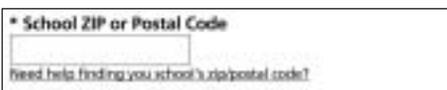
- Pull back the tab on the inside front cover of the student access kit to reveal your student access code.
- Type your six “word” student access code, one word in each box. Don’t type the dashes.



 **Note** Once you enroll in this online course, you will not need this access code any longer.

### School Location

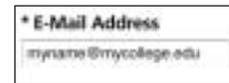
- Entering your school’s zip or postal code helps create a list of schools in your area for you to choose from in a later registration step.



- Select the country where your school is located.
- Click 

### Personal Information

- Enter your personal information (if the boxes are prefilled on this page, check that the information is current):
  - Your name.
  - A valid email address that you check on a regular basis.



 **Note** Your registration confirmation and other important information will be sent to the email address you provide.

### School Information

- Provide your school name and location information for all fields marked with a red asterisk.

If a dropdown list is available for **School Name** and your school is not on the list: Scroll to the bottom of the list and select **Other**. Then complete the rest of the needed school information.

### Login Name and Password

- Enter your desired login name and password. Choose something you can remember but you don’t think anyone else would request. You many want to use your email address as your login name.



 **Note** Do not use blank spaces. Once you are registered, you will receive an email confirming your login name and password.

### Security Question

- Select a security question and enter the answer.

## License Agreement and Privacy Policy

- Click [license agreement](#) and [privacy policy](#) to read this information.
- Click **Next** (only once!) to submit your registration for processing, which will take just a few moments.

 **Note** If the login name or password you specified is already in use, you will need to enter another one. Login name/password combinations must be unique.

## Confirmation & Summary

A confirmation page informs you that your student registration and enrollment in your instructor's course is complete, and that you will receive a confirmation email.

- (Optional) Print the Confirmation & Summary page to keep a record of this information.

You can now log into MasteringPhysics to access your online course.

- To log in now, click **Log In Now** or click the link for MasteringPhysics access from the Confirmation & Summary page. Then provide the login name and password from this registration.
- To log in later, see "Logging into MasteringPhysics" on page 7.

## Course ID

Upon completing registration, the first time you enter MasteringPhysics, you'll be asked for a Course ID. Enter the ID in order to be associated with your instructor's class. Be careful. You cannot edit this field!

## Student ID

Upon completing registration, you'll also be asked for your Student ID. Enter your Student ID according to your instructor's instructions. Be careful. You cannot edit this field.



Click Submit Information button.

## 2 Logging into MasteringPhysics

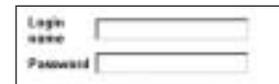
Once you successfully register as a student and enroll in your MasteringPhysics course, you can log into MasteringPhysics.

- Instructors set the end date for any online MasteringPhysics course. You can continue to log into the course as long as its end date has not passed.

 **AOL Users** cannot access MasteringPhysics using the America Online® browser. However, you can log into AOL®, minimize the AOL browser, and then launch Internet Explorer (or any supported browser) separately to access MasteringPhysics.

To log in:

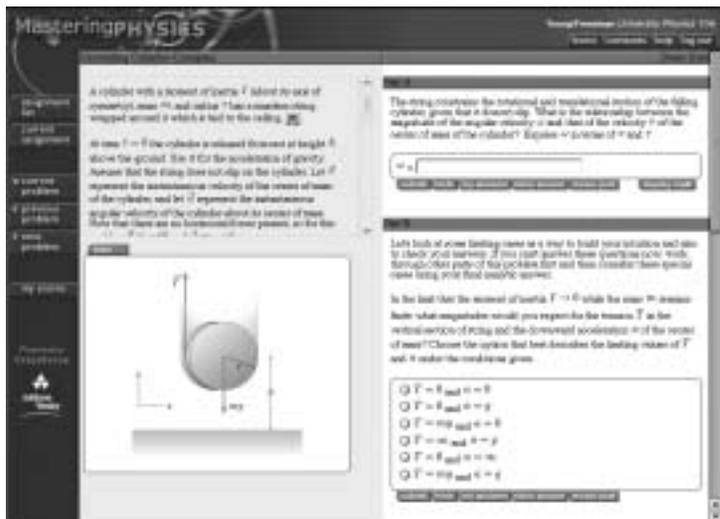
- Go to **www.masteringphysics.com**.
-  **Tip** Consider adding this location as a favorite or bookmark to your browser, making it easier for you to return to.
- Click the **Log In** button for students. If this is your first log in, please read the information under **Course ID** and **Student ID**.
- On the Log In page that appears, type the login name and password from your registration and click **Log In**.



 **Note** If you ever forget your login name or password, click the [Forgot your login name/password?](#) link on the Log In page.

### 3 Getting into your online course

After you enroll in your instructor's course, you will be able to see the assignments your instructor has selected for you.



- In the left navigation bar, click **assignment list**.

Your instructor may assign *Introduction to MasteringPhysics*. If so, this is an excellent way to learn how to use the program.

 **Tip** You may click on **help** in the top navigation bar.

### 4 Logging out of MasteringPhysics

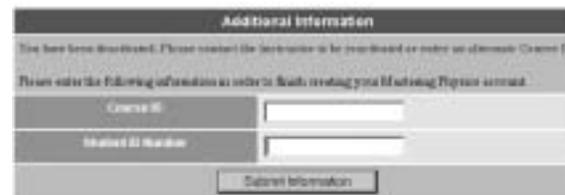
To end your session in MasteringPhysics:

- Click **log out** at the top right of the page. You may log out any time during your homework assignment. Your work is automatically saved so you can take a break and come back to finish a problem later.

 **Note** Avoid just closing the browser window (especially in a computer lab environment) because this may not end your personal MasteringPhysics session.

### 5 Enrolling in Next Semester's Course

It is easy to transfer from one quarter or semester to another. At the end of your first quarter/semester, your professor will have you automatically deactivated from your current course. This means that after your course end date, the next time you log in to MasteringPhysics, you'll be prompted for a new Course ID and Student ID. Please ask your new instructor for this information.



### 6 Entering math in MasteringPhysics

Most MasteringPhysics problems ask for answers in the form of either numbers (e.g. "How many meters did the car travel?") or algebraic expressions (e.g. "Find an expression for the circumference of a circle in terms of  $\pi$  and  $R$ "). MasteringPhysics uses standard rules of precedence for mathematical expressions, modeled on the conventions used by the Maple math software and similar to a TI calculator. The default first assignment, *Introduction to MasteringPhysics*, provides a sequence of self-contained tutorials to guide users on how to enter math. What follows is a summary of what is covered in that assignment.

#### Symbolic Answers

Symbolic answers are common in MasteringPhysics, so read this section closely. Symbolic answers involve numbers, variables, and functions, combined with the mathematical operations:

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponentiation	^

Fractions	are input using the / sign and parentheses where appropriate, e.g., (5+4)/(3+1)
Exponents	are entered using the ^ sign and parentheses where appropriate, e.g., (2+1)^3

### Order of Evaluation

MasteringPhysics uses the calculator-standard rules for the order in which mathematical operators are evaluated in situations where multiple operators are included in an expression as follows:

1. For terms inside parentheses, the most deeply nested terms are evaluated first (Therefore always use an extra pair of parentheses when in doubt).
2. ^ stands for exponentiation and is the top priority after parentheses.
3. \* and / for multiply and divide have next priority
4. + and - have lowest priority and are done last
5. Within each priority class, evaluation proceeds left to right, except exponentiation.

 **Tip** If you do not use parentheses consistently and explicitly, you could find these rules interpret your answer with a counterintuitive result. (e.g.  $16/2*2^{1/2}$  is 8 (exponentiate first, \* and / left to right). So, get into a good habit and always add parentheses.

### Variables

Variables in symbolic answers are always given in the problem text. To check how to input them, see Rollover Display help (p12).

### Symbolic answers and special functions

Symbolic answers and special functions are case-sensitive. M and m, for example, may indicate two different masses in a problem.

 **Tip** A good habit to get into is to use lowercase consistently unless the variable or special function is given in upper case (e.g. M, F(x))

### Symbolic answers can also include special functions

For easy reference, the supported trigonometric functions are listed below. Note: When you enter these trigonometric functions, use **lowercase** letters always and consistently as shown:

Sine	sin(x)
Cosine	cos(x)
Tangent	tan(x)
Secant	sec(x)
Cosecant	csc(x)
Cotangent	cot(x)
Arcsin	arcsin(x)
Arccosine	arccos(x)
Arctangent	arctan(x)
Square Root	sqrt(x)
Absolute Value	abs(x)
(Natural) Logarithm	ln(x)
(Common) Logarithm	log(x)

## 7 Using online math help

MasteringPhysics provides a number of additional online features to help the user with math entry. We strongly encourage you to complete the *Introduction to MasteringPhysics* assignment first.

### Display Math

Using parentheses, multiple operators, a variety of variables and special functions can be confusing at first. MasteringPhysics, therefore, provides a **display math** button that will interpret your input and display it in formatted math using Greek symbols, sub- and superscripts, and fraction notation as it would appear in your textbook. The **display math** feature allows you to review the notation and determine if you have input your answer as desired before you submit it for grading.

### Variable Checking

In evaluating a symbolic response, MasteringPhysics checks for variable names that do not appear in the solution and informs you of their names. This feature will find both misspellings and some misunderstandings. MasteringPhysics then evaluates your response to determine if it is algebraically equivalent to the correct solution(s).

### Rollover Display Help

If you position your mouse on a Greek symbol or an expression, a rollover box will appear explaining how you would type in the notation correctly. For instance, rolling over  $\Omega_B$  in the problem will display *omega\_B* in a small box. Pretty soon you won't need to rely on the Rollover feature to help you input math.

## 8 Technical support

For technical support, please visit <http://www.aw-bc.com/techsupport> and complete the appropriate online form. Technical support is available Monday - Friday, 9 am - 6 pm, Eastern Time (US and Canada).