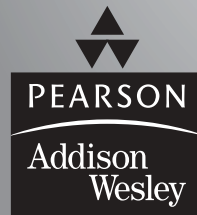# Getting Started with MasteringPhysics™

POWERED BY MYCYBERTUTOR

STUDENT EDITION

Welcome to MasteringPhysics™

MasteringPhysics helps you when you need it most – when you are stuck working out a problem. Designed specifically for university physics students, MasteringPhysics includes detailed worked examples complete with multiple hint-giving options. The problems are standard homework problems, which include hints and simpler sub-problems to help you bridge the gap between worked examples and end-of-chapter problems. In short, MasteringPhysics helps you better prepare for your exams.

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. Your email address is required to pass along completed MasteringPhysics assignments online to your instructor.

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.

Write the Course 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.

(1) Registering in MasteringPhysics

Online registration and course enrollment take about 5 minutes.

You may be able to register and enroll by simply following the online instructions available by going to http://www.masteringphysics.com, clicking the appropriate title, and clicking **Register**.

If you prefer written instructions, use this booklet as your guide.

☑ Registration Tips

- ***On-screen boxes marked with an asterisk (*) are required***— you must type an entry or make a selection to continue with online registration. If you skip one of these boxes and click Next, you will be prompted in red to insert an entry.

- ***If you ever get stuck while registering***, you can always find information by clicking this icon online: ⊘

- ***If your online registration session is interrupted***, you can always go back and restart. Your student access code is valid until you complete the registration process successfully.

- ***If you ever need to change anything during registration***, click the Back button to return to the previous registration page. (You will not lose any information you have already entered by going backward.) You can also edit or update your account information later, by clicking the View Your Account Summary link.


Okay, let's get started...

➢ Go to http://www.masteringphysics.com and click the appropriate title.

If you do not have a valid student access code, you can use an American Express, MasterCard or VISA card to purchase access online while registering. In this case, click the **Purchase subscription** link and follow the on-screen instructions. Your experience will differ slightly from the instructions in this booklet.

Your access code/Do you have an account?

➢ 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.
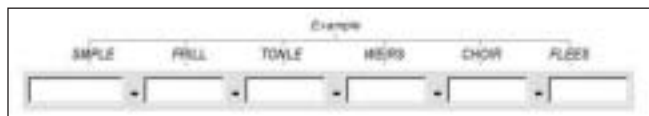
➢ Are you a returning user?

• If so, click **Yes**. Type your existing login name (or user ID) and password that you have used for a Pearson Education online site or course materials that accompanied a textbook published by Addison Wesley, Allyn & Bacon, Benjamin Cummings, Longman, or Prentice Hall.

• If not, leave **No** selected. You will create a login name and password later in this process.
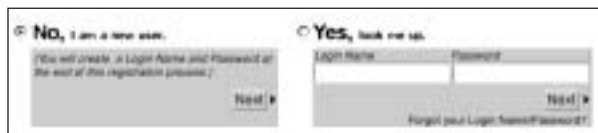
➢ Click **Next**.

Your instructor's Course ID

➢ Type your instructor's Course ID in the **Course ID** box. If you haven't received a Course ID yet, contact your instructor to get it.

➢ Click **Next**.

Your contact info

➢ Enter your contact information (if the boxes are prefilled from registering before, check that the information is current):

• First name, middle initial (optional), and last name.

• Enter a valid email address that you check on a regular basis. Your email address may look like this: *yourname@yourschool.edu*


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

• Enter your school's ZIP code (US) or postal code (international). If you do not have this information handy, you can look up your school on the Internet.
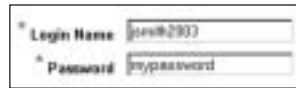
➢ Click **Next**.

Your academic institution

➢ Select your school from the **Institution Name** list and click **Next**. If your school's name doesn't appear, scroll to the bottom of the list and click **Other**.
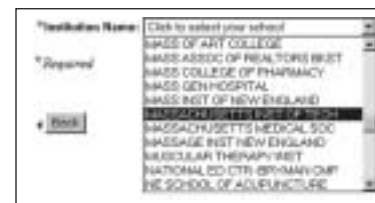
➢ If you selected **Other**, the registration process prompts you to provide additional information about your academic institution.

• Type the name of your school in the **Institution Other** box and the city where the school is located in the **City** box.

• Select the name of your state or province from the **State/Prov** box. If your area doesn't appear in the list, click **Other** at the end of the list and enter the area name in the **Other** box.

• Select the name of your country from the **Country** box. If your country's name doesn't appear in the list, click **Other** at the end of the list and enter its name in the **Other** box.

• Click **Next**.
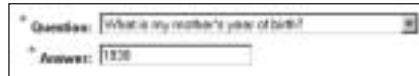
Your login name and password/License agreement

➤ Enter your desired login name. Choose something you can remember but you don't think anyone else would request. For example, you may want to use both letters and numbers, such as *jsmith2004*. Similarly, enter a password you can remember, such as *arugula*.

> 📝 **Note** *You can use letters, numbers or underscore (_) characters. Do not use blank spaces. Once you are registered, you will receive an email confirming your login name and password.*

➤ Select a question and enter the answer to help verify your identity if you ever forget your login name or password.

➤ Click the **License Agreement** link to open and read the license agreement in a new window.

➤ Return to the original window and click the **I agree** checkbox to confirm that you agree with the terms and conditions of the license.

➤ Review your registration information in the column on the right. If everything is accurate, click **Next** to process your registration.

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

> 📝 **Note** *You will need your login name and password each time you log in to http://www.masteringphysics.com to access your online course. Keep this information handy, but protect it from view by others.*

Write your login name here: _____

A confirmation page informs you that your registration and course enrollment is complete. Print this page to keep a copy of your login name and password for later reference.

Congratulations! You have completed registration and enrolled in a course.

② Logging into MasteringPhysics

Once you successfully register as a student and enroll in your online MasteringPhysics course, you will be able to log in to MasteringPhysics anytime.

To log in:

➤ From http://www.masteringphysics.com, click the appropriate title.

> ✅ **Tip** *You can add this location as a favorite or bookmark to your browser, making it easier for you to return to.*

➤ Under the Established User column, type the login name and password you created during registration.
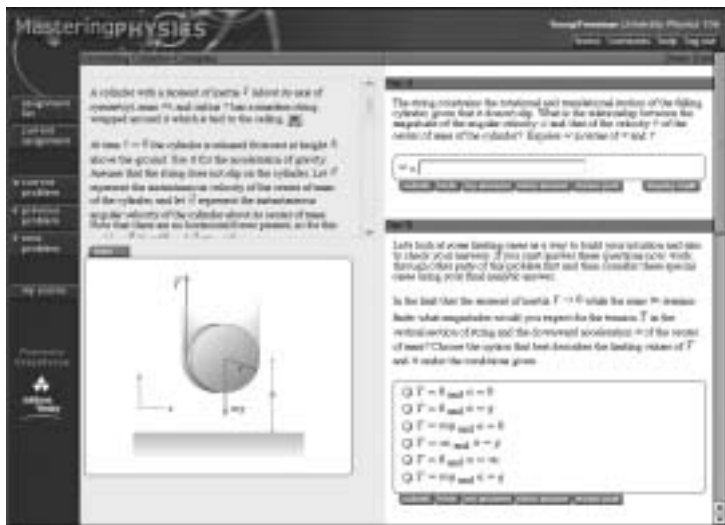

> 📝 **Note** *If you ever forget your login name or password, click the* **Forgot your Login name/Password?** *link.*

➤ Click [Log In].

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.

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

⑤ 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 16 (exponentiate first, * and / left to right). So, get into a good habit and always add parentheses.*

Variables

Variable names in symbolic answers are always stated in the problem text.

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 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)

Fractions

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

Exponents

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

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.

⑥ Using helpful features

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 **math display** 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 **math display** 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 L^2 in the problem will display L^2 in a small box. Pretty soon you won't need to rely on the Rollover feature to help you input math.