

## **Why Should I Take Physics 1103 and Physics 1104?**

The thousands of students who have taken Physics 1103 and 1104 come from many different majors – such as business, agriculture, the social sciences, the humanities, and the arts. These students have very diverse career goals. No matter what their professions will be, all of these students, including you, have one thing in common – during your life, you will use energy!

We pay for the energy we use in two ways: in the money spent to pay energy bills and in consequence to our environment. The goal of the World of Energy courses, Physics 1103 and 1104, is to provide you with the knowledge you need to make informed energy choices. Each course covers basic concepts of physics in the context of energy use. The content of Physics 1103 includes energy efficiency and safety. Physics 1104 includes the advantages and disadvantages of various types of energy use, including their effect on climate change. Physics 1103 and 1104 together cover the topics of introductory physics and energy use. However, the courses are independent. Students may take Physics 1104 without having taken Physics 1103. Both courses are taught in a hands-on activity style that explores physics concepts using everyday objects.

### **Class Activities**

During two 80-minute classes per week, your instructor will explain physics concepts, present demonstrations, and introduce hands-on activities to illustrate these concepts. To help organize, understand, and remember the information from the demonstrations and class activities, students complete and turn in activity sheets during each class. Activity sheets for Physics 1103 and 1104 are found on the course web site.

In the World of Energy, students learn physics concepts primarily by doing activities in class, observing instructor demonstrations, and participating in class discussions. While the textbook chapters contain important information and should be read before each class, they do not provide all the information students need – some physics concepts have been left for you to discover in your classroom activities. Therefore, class attendance and active participation are a very important for success in Physics 1103 and 1104.

### **Course Objectives**

The World of Energy courses, Physics 1103 and 1104, are each three semester credit hour courses that fulfill the GEC physical science requirement for the Bachelor of Arts degree at The Ohio State University. These courses explore the basic principles of physics in the context of energy use. The courses include practical examples from everyday life to help you use energy safely and wisely. They help prepare you to make rational, informed decisions regarding energy policy, the environment, and your own place in the changing World of Energy.

As Physical Science GEC courses, the objectives of Physics 1103 and 1104 include fostering an understanding of the principles, theories and methods of modern science, the relationship between science and technology, and the effects of science and technology on the environment. These learning objectives are enhanced by the use of a hands-on approach to investigate physics concepts. Through class activities and demonstrations, the World of Energy gives students an opportunity to experience first hand the laws of physics. Physics concepts are conveyed by your instructor, the course textbook, activity sheets completed during class, and course videos.

### **Course Material: Textbooks**

The World of Energy textbooks for Physics 1103 and 1104 supplement the class activities and videos. The textbook chapters are found on the course web site. Each chapter of the textbook corresponds to one class period. To get the most benefit from class, students should read the text prior to each class. The textbook contains Concept Check questions with answers to check your understanding of the material.