**Physics Instructional Center (PIC)**

The Physics Instructional Center (PIC) offers comprehensive and diverse undergraduate Physics laboratory courses, giving students the opportunity to participate in the world class experimental and training opportunities. Courses offered in this center, provide students with “Hands On” exposure to the concepts and principles studied in their respective lecture classes. Laboratory exercises provide the hands-on experience necessary to appreciate the methods of science and scientific discovery. It is the goal of the PIC laboratories to introduce students to the relationships of physics. Laboratories in the PIC are the classrooms where the relationships of physics and science in general, are illustrated in a manner that encourages individual student participation. The center is designed to do more than simply illustrate proven relationships. Its ultimate goal is to provide students with the tools and experience necessary to pursue their own discovery. In the PIC labs, students explore some of the fundamental concepts of physics; more importantly, they are introduced to some of the tools of science and also experience the methods of scientific discovery.

In order for our students to understand physics, and science in general, approximately 10 different experiments are offered for every given course in a semester. The center challenges students to study and understand science as an organization of apparently unrelated facts into a useful whole, and going beyond verifying what we understand. Students in the PIC use science to challenge what we know and develop methods to prove or disprove our hypothesis. They learn that Physics is that branch of science that serves as the foundation for all other scientific and engineering disciplines. For many students, the concepts and relationships discussed in lecture are difficult to visualize and have no application outside of the physics course. However, exercises in the PIC lab courses are designed to help the student bridge the gap between concept and application. The labs are carefully chosen and structured so that the concepts discussed in lecture can be demonstrated as well as verified, and it is our students’ responsibility to accurately complete the exercises, to successfully illustrate the concepts of physics.

Students taking PIC courses are required to be familiar with certain level of physical concepts to be studied, and are required to study the exercises before coming to the lab and review any additional material as may be necessary. Each exercise is designed and written to minimize the amount of outside reference material required. However, a careful reading of the material covered in lecture will compliment the laboratory experience. Each exercise contains the following:

* Overview of the physical concept to be explored
* What the student should achieve and learn having successfully completed the lab
* A list of required equipment
* A step by step procedure complete with all necessary data tables, illustrations, and room for calculations
* Analysis designed to reinforce and review what students learned

The center’s labs are located in the second floor of Physics building, with the main office in room 209 at the University of North Texas.

PIC total student population per semester: Approximately 1400-1500

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