

Section I: Courses

The physics department offers a wide array of courses from undergraduate through graduate level. TAs should familiarize themselves with the exact description of the course(s) they are to instruct. A complete listing of these courses can be found in appendix A. This listing of courses and descriptions are based on the 1999-2000 academic year.

Types of Introductory Physics Course

Lecture Classes – Two to four hours each week, sometimes with informal cooperative group learning.

Drill Sections/Practicum – One to two hours a week. Instructor reviews assigned homework and answers questions pertaining to the course material. A ten-minute quiz, 10 – 20 points, is given each week. Drill instructors are also encouraged to use demos related to the material. A list of available demos can be obtained from the lab curator.

Laboratory – Two, three, or four hours a week. (Four-hour sections meet twice a week for two hours each time.) Cooperative group learning with the TA acting, as the facilitator, is the instructional method used by most of the labs offered. The lab is performed after the instructor covers the necessary safety instructions and presents necessary information. Lab experiments are usually completed during one lab session. For most lab sections the students are required to write a formal lab report for credit. Several lab sections are now using an inquiry based activity guide that does not require a written lab report for every activity.

Tests/Exams – Tests are arranged by professors and usually take place during the scheduled lecture class time. However, instructors reserves the right to give tests at other designated times and places within university guidelines.

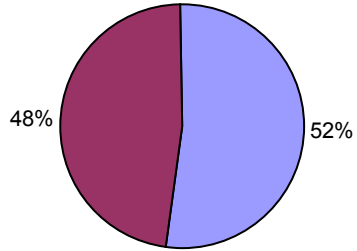
Student Demographics

It is important for instructors to know the demographics of the students being taught. The undergraduate population that comprises the students taking physics courses represent most of the colleges, schools, and programs on campus. The enrollment population for the undergraduate physics courses taught at the University of Arkansas is given in the following pie graphs. The percentage of Arts and Science (ARSC) students who are declared physics majors is also included. All percentages are based on the enrollment figures for the 1999 Fall Semester after the drop date. For a further break down of students for the courses listed in the graphs, see appendix B.

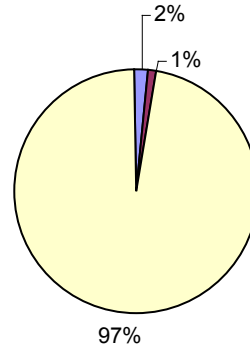
Course Enrolment by College and Gender

Physics in Human Affairs (PHYS 1023)

Gender

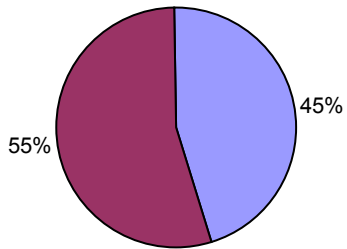


College/Program

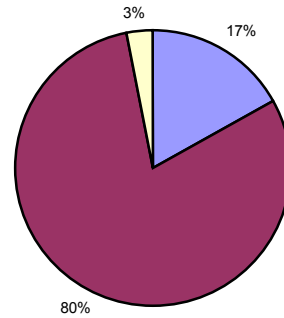


Physics for Architects (PHYS1044)

Gender

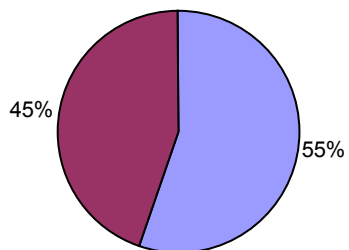


College/Program



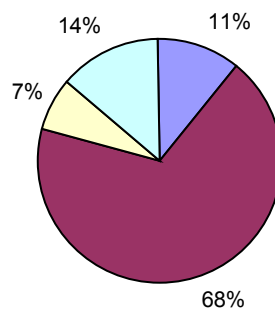
College Physics I (PHYS 2013)

Gender



Male Female

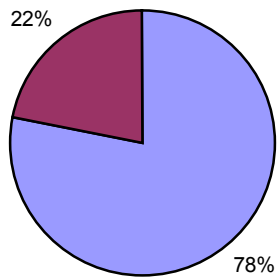
College/Program



AGRI ARSC BADM EDUC

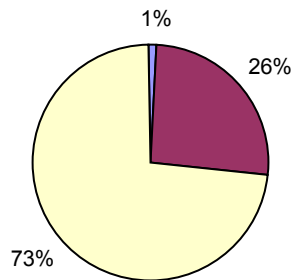
University Physics I (PHYS 2053)

Gender



Male Female

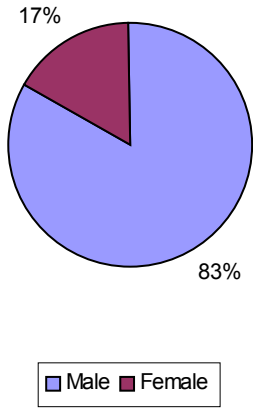
College/Program



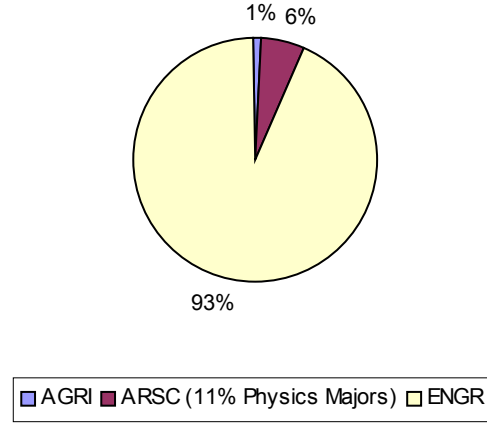
AGRI ARSC (10% Physics Majors) ENGR

University Physics II (PHYS 2073)

Gender

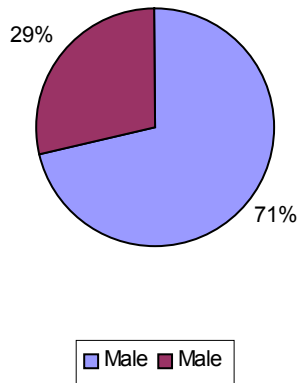


College/Program

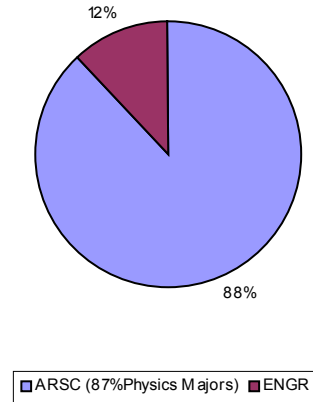


University Physics III (PHYS 2093)

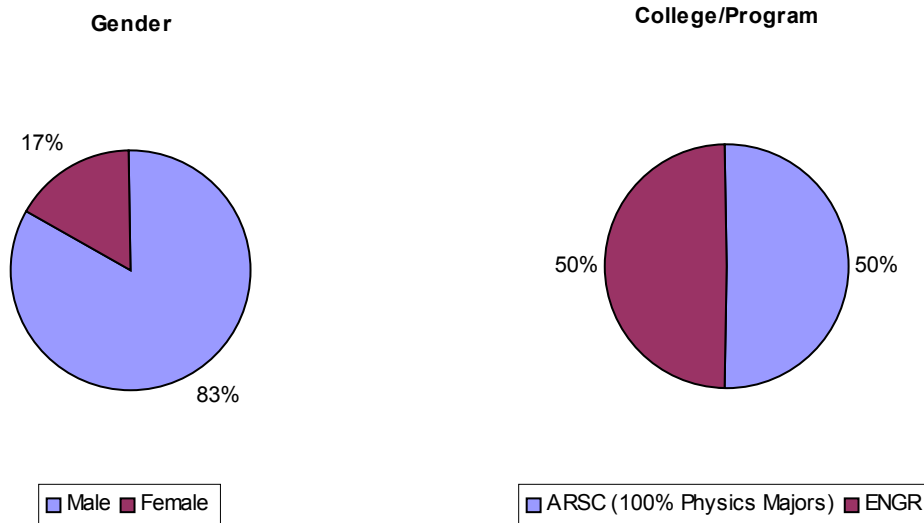
Gender



College/Program



Optics (PHYS 3544)



These percentages are listed in order to give the TAs an idea about the kind of students taking physics course and labs. Most physics courses require the students to have already taken or to be currently taking a certain level of math. The chart below shows the level of math that students should be familiar with based on the physics course in which they are enrolled. This should help TAs in preparing notes for class.

Math Levels Required for Undergraduate Physics Courses

PHYSICS COURSE NUMBER	PHYSICS COURSE NAME	MATH COURSE NUMBER	MATH COURSE NAME	PRE OR CO REQUISITE
PHYS 1023	Physics in Human Affairs	NONE	NONE	NONE
PHYS 1044	Physics for Architects I	NONE	NONE	NONE
PHYS 2013	College Physics I	MATH1203	College Algebra	Pre
		MATH1213	Plane Trigonometry	Pre
PHYS 2053	University Physics I	MATH2554	Calculus I	Co
PHYS 2073	University Physics II	MATH2564	Calculus II	Co
PHYS 2093	University Physics III	MATH2574	Calculus III	Co
PHYS 3544	Optics	MATH2564	Calculus II	Pre