

Here is some information regarding how to receive credit for PHY 1420 (calculus-based General Physics I) at Baylor based on the AP Physics C (Mechanics) exam, without the AP Physics B, AP Physics 1, or AP Physics 2 exams.

The faculty of the Physics Department performed a study of the AP Physics tests a few years ago and realized some important differences between the algebra based AP Physics courses (AP Physics B, AP Physics 1, and AP Physics 2) and AP Physics C. Even though AP Physics C is calculus-based, which makes it more rigorous, it does not cover the breadth of topics that the algebra based courses do. High school students who take only AP Physics C *could be* missing fluids, wave motion, sound, and thermodynamics -- about 1/3 of the content in our PHY 1420 course. Students who have taken both an algebra based sequence and AP Physics C will have adequately covered all the material, but we worry that students with only AP Physics C will have a gap in their knowledge.

**For students that score a 4 or a 5 on the AP Physics C (Mechanics) exam**, we offer a placement test that covers the missing topics. Students who pass the placement test will receive Baylor credit for PHY 1420 (calculus-based Mechanics) and can proceed to take PHY 1430 (calculus-based E&M).

The textbook that we currently use for both PHY 1420 and PHY 1430 at Baylor is "Physics for Scientists and Engineers" (4th edition) by Douglas Giancoli. We recommend the version of the textbook that contains Chapter 1-44.

How can you prepare for the placement test? If you can obtain a copy of Giancoli, the sections to study on fluids, wave motion, sound, and thermodynamics are the following:

Chapter 13: Sections 1-10 (Fluids)

Chapter 15: Sections 1-4 and 6-9 (Wave Motion)

Chapter 16: Sections 1-4 and 6-7 (Sound)

Chapter 17: Sections 1-4 and 6-9 (Thermodynamics: Temperature and the Ideal Gas Law)

Chapter 18: Sections 1-4 (Thermodynamics: Kinetic Theory)

Chapter 19: Sections 1-10 (Thermodynamics: Heat and the First Law)

Chapter 20: Sections 1-8 (Thermodynamics: Second Law, Entropy)

Essentially any university-level general physics textbook ought to cover this material, if you have easy access to another book. After you receive the results of your AP Physics C exam, the placement test can be taken at any time at Baylor – contact the Physics department.