

UMBC UGC Program Changes & Other Request: Computer Engineering

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Proposed Effective Date: Fall 2022 (and retroactive for existing students)

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Specifics (see instructions):

OLD:

Students are admitted to the computer engineering program only when they pass all five of the following Gateway courses: CMSC 201, MATH 151, PHYS 121, CMPE 212 with a grade of “B” or better and ENES 101 with a grade of “C” or better. Enrolling in a gateway course at UMBC or a Computer Engineering Department equivalent course at another institution is considered an attempt.

NEW:

Students are admitted to the computer engineering program only after they obtain the following required grades the gateway courses: a “B” or better in CMSC 201; a “B” or better in CMPE 212; a “B” or better in MATH 151; a “B” or better in either PHYS 121 or PHYS 122; and a “C” or better in ENES 101. Enrolling in a gateway course at UMBC or a Computer Engineering Department equivalent course at another institution is considered an attempt.

DIFFERENCE:

Now students can obtain a “B” in either PHYS 121 or PHYS 122 as opposed to being required to meet the requirement in PHYS 121.

Rationale (see instructions):

This change would allow students to progress in the major while mastering additional concepts and skills in physics and related mathematics and avoid repeated attempts in Physics I in the case that a C was earned in the first attempt. We note that prior to 2016 the CMPE Gateway requirement was based Physics II, and that a 2016 requirement change to use Physics I instead was intended to provide a set of gateway requirements that students should complete sooner. However, we found in practice that this causes some students to retake Physics I whereas performance in Physics II is a stronger concern for our program. Given the strong relationship between concepts in Physics II and Computer Engineering, demonstrating mastery in Physics II is an acceptable alternative to demonstration of mastery in Physics I in a repeated attempt. We still require a C or better in either Physics course, since we require a C or better to all courses applied towards a degree in CMPE.

This change has been reviewed by faculty within the program and this final plan was reviewed with approval by the CMPE UGC on 2021-02-15.