

UMBC UGC Program Changes & Other Request: B. S. in Physics Program

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Specifics (see instructions):

We would like to make several minor changes in our program to make it consistent with some previously-approved changes.

1) Physics Honors Program On Nov. 6, 2008, we were informed that the UGC approved the change in required courses for the major to include TWO physics electives (six credits) instead of PHYS408 and one elective. This affects our current requirements for the Physics Honors Program, which has always had as its intent to require *one more elective* than that required for non-honors majors.

Currently the Honors Program Listing is as follows:

Students must apply for admission to the departmental honors program by the end of the first semester of their junior year. There is a university requirement of a GPA of 3.5 or better in the major and at least nine credits of honors course work. For physics majors, these requirements are met by taking PHYS 490H: Senior Seminar, PHYS 499H: Senior Research Physics and six credits of elective courses. PHYS 490H: Senior Seminar is taken in the semester prior to PHYS 499H: Senior Research. An honors course in mathematical physics is also offered (PHYS 480H).

We wish to change it to:

Students must apply for admission to the departmental honors program by the end of the first semester of their junior year. There is a university requirement of a GPA of 3.5 or better in the major and at least nine credits of honors course work. For physics majors, the requirements are met by taking PHYS 490 (Senior Seminar), PHYS 499H (Senior Research Physics) and nine credits of upper-level elective courses, six of which must be lecture-type courses.

2) Combined B.S./M.S. Program

Currently the Catalog listing is as follows:

This program is open to highly qualified advanced undergraduate students majoring in physics. UMBC Graduate School regulations allow nine graduate-qualified credits to be taken as an undergraduate and applied toward the M.S. degree. For the combined B.S./M.S. program in physics, these include PHYS 407, 408 and 424. The subsequent 21 graduate credits are taken as a graduate student and are selected according to the individual student's interests with the approval of a graduate advisor, but they must include PHYS 605. Students wishing to participate in the B.S./M.S. program must apply before the end of the junior year. Application to the Graduate School for admission to the program must be made at least one semester prior to completion of the requirements for the B.S. degree. Graduate School regulations require the maintenance of a 3.0 GPA in courses taken for the M.S. degree.

We wish to change it to:

This program is open to highly qualified advanced undergraduate students majoring in physics. UMBC Graduate School regulations allow nine graduate-qualified credits to be taken as an undergraduate and applied toward the M.S. degree. For the combined B.S./M.S. program in physics, these may include PHYS 407, 424 and other approved 400-level electives such as 403, 408, 425 or 430. The subsequent 21 graduate credits are taken as a graduate student and are selected according to the individual student's interests with the approval of a graduate advisor, but they must include PHYS 605 or PHYS 705. Students wishing to participate in the B.S./M.S. program must apply before the end of the junior year. Application to the Graduate School for admission to the program

must be made at least one semester prior to completion of the requirements for the B.S. degree. Graduate School regulations require the maintenance of a 3.0 GPA in courses taken for the M.S. degree.

Rationale (see instructions):

Item 1) PHYS490 is no longer listed as an honors course. It does, however, require permission of the instructor and is therefore open only to selected superior students. The requirement of nine elective credits (instead of the six required of regular majors) is in keeping with our intent to require at least one additional elective for Honors program students. The requirement that six of the elective credits be in “lecture-type” courses allows students the option of taking up to six credits of directed research (PHYS499H + one other research course), but restricts them to no more than that.

Item 2) Since PHYS 408 is now an elective, offered on the same basis as 403, 425 or 430, it has been listed as such. Also, our graduate offerings now include two Mathematical Physics courses (PHYS605 and 705), which are completely stand-alone and cover different material. Either one would provide minimum mathematical background expected of an M.S. student (although in many cases we would recommend that the student take both).