

5-Year Co-Terminal B.S. Physics/M.S. Physics Program

This program meets the needs of two classes of IIT Physics Majors: (1) the student who enters with a significant amount of Advanced Placement credit, wants to pursue a Ph.D. but does not wish to graduate in 3 years; and (2) the student who is interested in pursuing a Ph.D. in Europe, where a Masters level preparation is expected for the 3-year Ph.D. programs. Many students in group (1) now stay the extra year and obtain a second B.S. degree. This provides them with a more directed option which can cut more than one year off of their Ph.D. program and give them excellent preparation to succeed in a top program. The students in group (2) include both domestic students and a possible new market of European students who wish to obtain a university degree in the United States but be able to return to Europe for a Ph.D.

We expect that the total enrollments for this program will be in the single digits. Since both the B.S. and M.S. in physics are currently being offered and we already have a significant number of graduate school-bound undergraduates taking our graduate courses as electives, we do not anticipate any need for additional instructional resources.

Program Details

Students may apply for admission to this co-terminal degree program after the 4th semester in the Physics B.S. program. A minimum GPA of 3.25 is required for consideration. Students will be dual-enrolled in the B.S. and M.S. programs with both degrees will be awarded simultaneously at the end of 5 years.

Curriculum

The program follows the standard B.S. Physics curriculum until the end of the third year. Eight (8) credit hours (**listed in RED below**) will be counted for both B.S. and M.S. and a Masters Thesis is an option but not required (see alternative curricula). The total credits are $126 + 32 - 8 = 150$ for the entire program. Specific notes to the attached programs of study are as follows:

- **PHYS 405 & 406 (Fundamentals of Quantum Theory I & II)** substitute for **PHYS 509 (Quantum Theory I)** as prerequisite for **PHYS 510 (Quantum Theory II)**.
- **PHYS 485 (Colloquium)** substitutes for **PHYS 585 (Colloquium)**
- For the Thesis option, should **PHYS 491 (Undergraduate Research)** be taken as an elective, one of the two **PHYS 591 (Masters Research)** courses must be substituted by a **Graduate Elective (500+)** course so that no more than 6 credit hours of research may be applied to the overall program.
- For the non-Thesis option, the 6 credit hours of **PHYS 591 (Masters Research)** must be substituted by two **Graduate Elective (500+)** courses.