

Sample schedule for Accelerated Master's in Mechanical Engineering and Applied Mechanics

Note: If you take Physics 105/106 your Sophomore year, then push the sample schedule forward a year. For example, the freshman year requirements will now be what you should take your sophomore year, etc.

Freshman year:

Required:

- Physics H105/H106
- Two semesters of math at the level you have placed into. If you have placed into Linear Algebra, and are not considering a math major, it is *slightly* better to take the version at Bryn Mawr (Math B203), since it is somewhat more applied; it is offered only in the spring. However, if you are considering a math major, you should take the version here (Math H215), which is offered both fall and spring

Recommended:

- CS H105/H106 (fall/spring) or CS H107 (fall only, requires prior programming experience) or Astro H104 (Topics in Programming: Physics and Astronomy, offered in spring only). You should certainly take at least one programming course at some point in your first five semesters, or gain significant programming experience in some other way.

Sophomore year:

Fall:

- Physics H211 "Laboratory in Electronics and Wave Physics"
- Physics H213 "Waves and Optics"
- Math H121 "Calculus III". (If you've already taken that, you should take Linear Algebra (H215).
- Two other courses

Spring:

- Physics H212
- Physics H214
- Math B203 "Linear Algebra", if you haven't already taken linear algebra. If you have, then consider taking Math H204, Differential Equations, but this could wait until the following year.
- One other course

Junior year:

Fall:

- Penn MEAM 3540 "Mechanics of Solids"
- Physics H303 or B303 "Statistical Physics" whichever is offered this year. · Optional (but

opens up design courses later, and is a very fun course): Penn MEAM 1001 "Introduction to Mechanical Design"

- Two other courses

Spring:

- Penn MEAM 3330 "Heat and Mass Transfer"
- Physics H304 "Computational Physics" (if available)
- Physics H309 "Advanced E&M" or Physics H302 "Advanced Quantum Mechanics", whichever is offered this year
- One other course

Senior year:

Fall:

- Physics H308 "Mechanics of Discrete and Continuous Systems", if offered this year. (The BMC version doesn't include enough fluids coverage to be worthwhile for students pursuing the Accelerated Masters.)
- Physics H399 "Senior Seminar" (half credit)
- Senior research
- One or two grad courses at Penn (from the list of courses that count toward the Master's in Mechanical Engineering). You should consult with your advisor at Penn about these, but we recommend ENM 5100 (Foundations of Engineering Mathematics I); be aware that this is a very challenging course, but it's extremely helpful for later grad courses. Complete list of grad courses that count toward the Master's is available here: <https://www.me.upenn.edu/masters/degrees-options/mse-in-meam-requirements/> Note that you can take a maximum of three grad courses during your time at Haverford

Spring:

- Physics H304 "Computational Physics" (if available)
- Physics H399 "Senior Seminar" (half credit)
- Senior research
- One or two mechanical engineering grad courses at Penn, chosen in consultation with your Penn advisor
- One other course

Summer after graduation from Haverford:

- Consider doing independent study and research (MEAM 5990 or 5970) with a Penn instructor willing to act as a supervisor during the summer. This will probably only be possible if you've made a good impression with one of the professors during your Penn courses. If you're able to do it, it makes it much more possible to complete the Master's in two additional semesters, rather than three.