

## PH.D. COURSE PLANNING SHEET

(For planning purposes only – You will need to go to [Banner Student](#) to complete the PhD program plan)

Area	Course #	Course Name <sup>†</sup>	When <sup>‡</sup>
<b>Proficiency In Applied Mathematics</b>			
<b>Technical Breadth</b>  Please provide a narrative justification on a separate sheet for the selected courses in this area*			
<b>Specialization</b>  Give descriptive title of specialization:  _____  _____  _____			

<sup>†</sup> **Course Name:** Note non-Dartmouth course names with an (EC) and attach a “Course Equivalence and Credit” form

<sup>‡</sup> **When:** Indicate F W S or X (summer) term and year the course was or will be taken; for example, F99, W00, S01 or X02.

### Course Guidelines

The foundation for doctoral work is undergraduate preparation in science, mathematics, and engineering principles. This knowledge base is traditionally strengthened and diversified at the doctoral level through a complement of graduate courses supporting breadth of knowledge in engineering and applied science, proficiency in applied mathematics, and depth of knowledge in a specialty area. For students entering the Ph.D. program with conventional undergraduate preparation in engineering (e.g. up to the BE or BS level), a typical pattern of coursework often includes 3 graduate-level courses supporting engineering science breadth, 3 graduate-level courses supporting applied math proficiency, and 4 graduate-level courses leading to depth of knowledge in a specialty, resulting in 10 graduate-credit courses. This course distribution and number are not requirements, however, but rather guidelines, as each student’s background and professional interests will be evaluated individually by his or her Special Advisory Committee, and a program of study developed on that basis.

\*Technical Breadth narrative: The Thayer School believes that a well-educated engineer can communicate beyond their dissertation area, and therefore has a breadth requirement. In describing the rationale for your

breadth courses, you should be emphasizing how these are \*different\* from your area of specialization. You may need to give a bit more info about your dissertation area to help the committee discern why courses with similar titles are actually distinct. Remember - the faculty come from different areas, and may not be aware of the distinctions.

Descriptions that include "... courses provide expertise in a different area..." are better than those that say things like "... courses contribute to my dissertation topic..."