

# BIOCHEMISTRY, DOCTOR OF PHILOSOPHY (PH.D.)

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Doctoral students are required to complete 21 credits of coursework, with 19 credits completed by the end of the fourth semester.

**Advance to Candidacy:** In addition to the coursework below, students must pass an oral defense of a written research proposal, presentation of a seminar, complete an independent research proposal.

**Post-Candidacy:** Students must complete 12 credits of BCHM899 Doctoral Dissertation Research and successfully defend a publication-quality dissertation that advances the field.

Course	Title	Credits
<b>Core Requirements</b>		
BCHM671	Protein Chemistry and Enzymic Catalysis	3
BCHM675	Biophysical Chemistry	3
BCHM661	Nucleic Acids I	2
BCHM662	Nucleic Acids II	2
BCHM699	Special Problems in Biochemistry	2
BCHM677	Computational Tools in Biochemistry	1
BCHM889	Seminar	2
BCHM698	Literature Seminar in Biochemistry	2
Electives with advisor approval (minimum of 4 credits)		4
<b>Dissertation Research Requirements</b>		
BCHM899	Doctoral Dissertation Research	12
<b>Total Credits</b>		<b>33</b>

Specific regulations are available from the Department of Chemistry and Biochemistry or from: [www.chem.umd.edu/graduateprogram/phdinbiochemistry/](http://www.chem.umd.edu/graduateprogram/phdinbiochemistry/) (<http://www.chem.umd.edu/graduateprogram/phdinbiochemistry/>)