

# Chemistry 45 Credit Endorsement

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Code	Title	Credits
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab	5
CHEM 1112 & 1112L	General Chemistry II and General Chemistry II Lab	4
CHEM 2211 & CHEM 2213	Inorganic Chemistry I and Inorganic Chemistry I Laboratory	4
CHEM 2232	Quantitative Analysis <sup>1</sup>	2
CHEM 2234	Quantitative Analysis Laboratory	2
CHEM 3301 & CHEM 3303	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 3302 & CHEM 3304	Organic Chemistry II and Organic Chemistry Laboratory II	4
CHEM 4400	Practicum in Physical Science	2
<b>One of the Following Sequences for 4-6 Credits:</b>		
CHEM 3331 & CHEM 3334	Instrumental Analysis and Instrumental Analysis Laboratory <sup>1</sup>	4
or		
CHEM 3341 & CHEM 3342	Topics in Physical Chemistry I and Topics in Physical Chemistry II <sup>2</sup>	6
or		
CHEM 4445 & CHEM 4447	Biochemistry I and Biochemistry II	6
Upper division CHEM courses not already used in the endorsement to reach 45 credits		12-14
<b>Total Credits</b>		<b>55-57</b>

<sup>1</sup> CHEM 2232 and CHEM 3331/CHEM 3334 have prerequisites of CHEM 1112, CHEM 1112L, and either MATH 1160 or MATH 1170.

<sup>2</sup> CHEM 3341/CHEM 3342 has prerequisites of CHEM 1112, CHEM 1112L; either MATH 1160 or MATH 1170; and either PHYS 1112 or PHYS 2212.