

## New Program Proposal

# Organic Chemistry, Graduate Certificate

The graduate certificate in organic chemistry is a 12-credit-hour program. It provides skills and training necessary to advance in the area of organic chemistry, which deals with the structure, properties, composition, reactions, and preparation of carbon-containing compounds. Organic chemists find careers in the rubber, plastics, petrochemical, pharmaceuticals, cosmetics, detergents, foods, coatings, dyestuff, and agricultural industries. The certificate requires three organic chemistry lecture courses (each three credits) and one elective course (three credits). All students must take the three required courses and one elective course, subject to the Graduate School regulations.

A minimum of three of the courses must be taken at UMSL. Research credits must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the Department of Chemistry and Biochemistry.

Certificate applicants must meet the general University of Missouri-St. Louis Graduate School admissions requirements to be admitted to the Certificate program. Students admitted to the Chemistry M.S. program are automatically eligible to pursue the Certificate; however, they must apply separately to the Certificate program. Students must maintain a minimum GPA of 3.0 to remain in the Certificate program. The certificate is awarded after completion of the 12 credit hours of courses listed below. Students must apply to be awarded the Certificate. Courses taken while enrolled as an undergraduate may not be repeated nor will they count towards the Certificate.

This 12-credit-hour certificate program also counts toward the 30-credit-hour Master of Science in Chemistry degree program requirements. Students may choose to combine this Certificate with other courses and/or Certificates to obtain the Master of Science in Chemistry degree.

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**Required Courses**

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CHEM 5602	Advanced Organic Chemistry I - Physical Organic	3
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CHEM 5612	Advanced Organic Chemistry II - Reactions And Synthesis	3
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CHEM 5652	Spectroscopic Identification of Organic Compounds	3
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<b>Elective</b>		<b>3</b>
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Choose one of the following:

CHEM 5694	Special Topics in Organic Chemistry
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CHEM 6905	Graduate Research in Chemistry <sup>1</sup>
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<sup>1</sup> If CHEM 6905 is chosen, then the research project must be in organic chemistry.

**Rationale**

The greater St. Louis area is a major chemical industry center. Many of the chemical and life sciences companies in the area need employees who are well-trained in organic chemistry. Graduates who hold the organic chemistry Certificate will find employment opportunities in the St. Louis area or will be able to advance their careers within their existing employment contexts. The certificate will increase UMSL's economic impact on the St. Louis metropolitan region.