

New Program Proposal

Chemistry, BA, Biochemistry Emphasis

Related Area Requirements

Candidates must complete:

MATH 1100	Basic Calculus	3-5
or MATH 1800	Analytic Geometry and Calculus I	
PHYSICS 1011	Basic Physics I	3
PHYSICS 1011L	Basic Physics I Laboratory	1
PHYSICS 1012	Basic Physics II	3
PHYSICS 1012L	Basic Physics II Laboratory	1
Total Hours		11-13

Course Requirements

CHEM 1000	Chemistry: The Central Science	1
CHEM 1111	Introductory Chemistry I (MOTR CHEM 150L)	5
CHEM 1121	Introductory Chemistry II	5
CHEM 2223	Quantitative Analysis in Chemistry	3
CHEM 2612	Organic Chemistry I	3
CHEM 2622	Organic Chemistry II	3
CHEM 2633	Organic Chemistry Laboratory	2

CHEM 3022	Introduction to Chemical Literature	1
CHEM 3302	Physical Chemistry for The Life Sciences	3
CHEM 3412	Basic Inorganic Chemistry	3
CHEM 3643	Advanced Organic Chemistry Laboratory	2
CHEM 4712	Biochemistry	3
CHEM 4722	Advanced Biochemistry	3
CHEM 4733	Biochemistry Laboratory	2
CHEM 4897	Seminar in Chemistry	2
Total Hours		41

No more than 45 hours in chemistry may be applied toward the degree. Each chemistry major must present a seminar and pass a comprehensive examination during the senior year.

At least 12 credits of chemistry at the 3000 level or higher must be completed at UMSL.

Rationale

(a) To provide students whose interest in chemistry is focused on the synthetic and biochemical aspects aiming at careers in the pharmaceutical industry with a more attractive degree path by scaling back the requirements in calculus, physics and physical chemistry and emphasizing courses in synthetic chemistry and biochemistry. (b) To provide a B.A. degree for students with these chemistry interests who are also interested in developing their foreign language skills. (c) To provide students with a pre-professional focus (pre-medical, pre-dental, pre-pharmacy, etc.) with an attractive chemistry degree option in which the calculus, physics and physical chemistry requirements are more appropriate for their needs and interests.