

# Bachelor of Science with a Major in Chemistry

## Requirements for the Bachelor of Science Degree with a Major in Chemistry

The chemistry department requires that the prerequisites for a number of chemistry courses be completed with a grade of "C" or better. Majors in the department should consult an advisor at frequent intervals to be certain that prerequisites are met at the appropriate time and with a suitable grade.

<b>Core Curriculum</b>		60
Core Area A, B, C, D.2.a, and E (See VSU Core Curriculum) <sup>1</sup>		42
Core Area F <sup>2</sup>		
MATH 2261	Analytic Geometry and Calculus I (Carry-over from Area D.2.a)	1
MATH 2262	Analytic Geometry and Calculus II	4
CHEM 1211 & 1211L	Principles of Chemistry I and Principles of Chemistry Laboratory I (unless taken in Area D.2.a)	0-4
CHEM 1212 & 1212L	Principles of Chemistry II and Principles of Chemistry Laboratory II (unless taken in Area D.2.a)	0-4
CHEM 2310	Quantitative Analysis	4
PHYS 2211K	Principles of Physics I (unless taken in Area D.2.a) <sup>3</sup>	0-4
PHYS 2212K	Principles of Physics II (unless taken in Area D.2.a) <sup>3</sup>	0-4
<b>Senior College Curriculum</b>		60
Select one of the following options:		
American Chemical Society Certified Degree		
American Chemical Society Certified Degree Biochemistry Option		
Pre-professional Option		
<b>Total hours required for the degree</b>		120

<sup>1</sup> Chemistry majors must take MATH 1113 in Area A and MATH 2261 in Area D.2.a One hour of MATH 2261 will carry over to Area F. In Area D.2.a, chemistry majors may select eight hours from CHEM 1211/CHEM 1211L, CHEM 1212/CHEM 1212L, PHYS 2211K, PHYS 2212K, or BIOL 1107K.

<sup>2</sup> Hours in excess of 18 will carry over into the Senior College Curriculum.

<sup>3</sup> Students in the pre-professional option may substitute PHYS 1111K for PHYS 2211K and PHYS 1112K for PHYS 2212K.

## Chemistry Major: American Chemical Society Certified Degree

Of the 60 semester hours, 39 must be in courses numbered 3000 or above

CHEM 2210	Sophomore Seminar	1
CHEM 3401	Organic Chemistry I	4
CHEM 3402	Organic Chemistry II	4
CHEM 3510	Inorganic Chemistry	4
CHEM 3601 & 3601L	Biochemistry I and Laboratory Techniques in Biochemistry	5
CHEM 3801	Physical Chemistry I	4
CHEM 3802	Physical Chemistry II	4
CHEM 4310	Instrumental Analysis	4
Advanced courses in Chemistry		6
Modern Foreign Language <sup>4</sup>		6-9
Electives <sup>5</sup>		15-18

<sup>4</sup> If three hours of language are taken in Area C of the core, only six will be required in this portion of the major.

<sup>5</sup> Includes hours which carry over from Area F.

## Chemistry Major: American Chemical Society Certified Degree

Biochemistry Option

Of the 60 semester hours, 39 must be in courses numbered 3000 or above

CHEM 2210	Sophomore Seminar	1
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BIOL 1107K	Principles of Biology I	4
BIOL 3100	Microbiology	4
CHEM 3401	Organic Chemistry I	4
CHEM 3402	Organic Chemistry II	4
CHEM 3510	Inorganic Chemistry	4
CHEM 3601 & 3601L	Biochemistry I and Laboratory Techniques in Biochemistry	5
CHEM 3602	Biochemistry II	3
CHEM 3801	Physical Chemistry I	4
CHEM 3802	Physical Chemistry II	4
CHEM 4310	Instrumental Analysis	4
Modern Foreign Language <sup>7</sup>		6-9
Electives <sup>8,9</sup>		2-9

Note: Students must obtain 39 total upper division (3000- or 4000-level) hours, with 6 of these 39 hours in a single subject other than chemistry.

<sup>6</sup> Unless taken in Area D.2.a

<sup>7</sup> If three hours of language are taken in Area C of the core, only six will be required in this portion of the major.

<sup>8</sup> Includes hours which carry over from Area F.

<sup>9</sup> May include CHEM 4910, but must be a biochemistry topic.

## Chemistry Major: Pre-Professional Option

Of the 60 semester hours, 39 must be in courses numbered 3000 or above.

CHEM 2210	Sophomore Seminar	1
BIOL 1107K	Principles of Biology I	4
Science elective, 2000 or above		4
CHEM 3401	Organic Chemistry I	4
CHEM 3402	Organic Chemistry II	4
CHEM 3510	Inorganic Chemistry	4
CHEM 3601 & 3601L	Biochemistry I and Laboratory Techniques in Biochemistry	5
CHEM 3801 or CHEM 3802	Physical Chemistry I Physical Chemistry II	4
Upper Division mathematics, computer science, or science electives <sup>10</sup>		7-8
Modern Foreign Language <sup>11</sup>		6-9
Electives <sup>12</sup>		13-17

<sup>10</sup> Students who wish to emphasize biochemistry shall take CHEM 3602 & CHEM 3802.

<sup>11</sup> If three hours of language are taken in Area C of the core, only six will be required in this portion of the major.

<sup>12</sup> Includes hours that carry over from Area F.