

**Cheminformatics - Bachelor of Science****Total Credits Required: 128****Required Courses****Department Core Requirements - 33 Credits**

Course	Credits
CH 1150 University Chemistry I <b>AND</b>	3
CH 1151 University Chemistry Lab I <b>AND</b>	1
CH 1153 University Chemistry I Recitation	1
<b>OR</b>	
CH 1112 University Chemistry-Studio Lab I	5
CH 1160 University Chemistry II <b>AND</b>	3
CH 1161 University Chemistry Lab II <b>AND</b>	1
CH 1163 University Chemistry II Recitation	1
<b>OR</b>	
CH 1122 University Chemistry-Studio Lab II	5
CH 1130 Orientation	1
CH 2212 Quantitative Analysis	5
CH 2410 Organic Chemistry I	3
CH 2411 Organic Chemistry Lab I	1
CH 2420 Organic Chemistry II	3
CH 3510 Physical Chemistry I	3
CH 3520 Physical Chemistry II	3
CH 4710 Biomolecular Chemistry I <b>OR</b>	
CH 4310 Inorganic Chemistry I	3
CH 4900 Senior Seminar in Chemistry I	1

**Math/Science Requirements - 49 Credits**

MA 1160 Calculus I	4
MA 2160 Calculus II	4
MA 2321 & MA 3521 Elm Lin Alg & Dif Eq OR	
MA 2320 & MA 3520 Intro Lin Alg & Dif Eq	4
MA 3160 Multivariable Calculus	4
PH 1100 Physics by Inquiry I	1
PH 2100 Univ Physics I-Mechanics	3
PH 1200 Physics by Inquiry II	1
PH 2200 Univ Physics II-Electricity and Mag	3
BL 1040 Principles of Biology	4
CS 1121 Intro Computer Science I	3
CS 1122 Intro Computer Science II	2
CS 1721 Object-Oriented Programming	1
CS 2141 Software Development C++	3
CS 2311 Discrete Structures	3
CS 2321 Data Structures	3
CS 4321 Introduction to Algorithms	3
CS 4421 Database Systems	3

**Required Electives - 9 Credits**

Course	Credits
<i>Choose 6 Credits from this List</i>	
CH 2421 Organic Chemistry Lab II	2
CH 3511 Physical Chemistry Lab I	2
CH 3521 Physical Chemistry Lab II	2
CH 4110 Pharmaceutical Chemistry I	3
CH 4120 Pharmaceutical Chemistry II	3
CH 4212 Instrumental Analysis	5
CH 4310 Inorganic Chemistry I <b>OR</b>	
CH 4710 Biomolecular Chemistry I	3
CH 4320 Inorganic Chemistry II	3
CH 4412 Spectroscopy of Organic Chemistry	3
CH 4430 Intermediate Organic Chemistry	3
CH 4510 Intermediate Physical Chemistry	3
CH 4560 Computational Chemistry	3
CH 4610 Introduction to Polymer Science	3
CH 4720 Biomolecular Chemistry II	3
CH 4910 Senior Seminar in Chemistry II	1
CH 4990 Undergraduate Research in Chemistry	6

*Choose 3 Credits from this List*

CS 3421 Computer Architecture	4
CS 4411 Intro to Operating Systems	4
FW 4089 Bioinformatics	3
MA 3210 Intro to Combinatorics	3
MA 4208 Optimization & Graph Algorithm	3
MA 4209 Combinatorics & Graph Theory	3
MA 4720 Design & Anal of Experiments	3
MA 4760 Mathematical Statistics I	3
MA 4770 Mathematical Statistics II	3
UN 3002 Cooperative Laboratory	2

**General Education Requirements - 28 Credits**

UN 1001 Perspectives on Inquiry	3
UN 1002 World Cultures*	4
UN 2001 Revisions	3
UN 2002 Institutions	3
Distribution Courses**	15

**Free Electives - 9 Credits****Co-Curricular Activities - 3 Units\*\*\***

\* Two semesters of a single modern language (6 credits) plus UN1003 (1 credit) may be substituted for UN1002

\*\* From HASS Distribution Course Lists: 6 of the 15 credits must be 3XXX or 4XXX level courses.

\*\*\* P. E. courses are taught as 0.5 unit classes. Thus 6 of these are needed for 3 units.