CHEMISTRY 315000BA

The following information has official approval of the **Department of Chemistry**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Italicized courses fulfill General Education requirements. Unless a course is specified, refer to the General Education guide at http://www.uakron.edu/advising/docs/General_Education_Guide.pdf

1st Year	Fall Semester	Credit Hours	Prerequisites
	English Composition I Requirement (Note d)	3	Appropriate placement by advisor
	Speech/Oral Communication Requirement	3	
	Physical Education/Wellness Requirement	1	
3150:151	Principles of Chemistry I Lecture	3	3450:145 (College Algebra) with C- or better
3150:152	Principles of Chemistry I Lab	1	3150:151prerequisite or corequisite
3450:149	Precalculus	4	3450:145 (College Algebra) or appropriate placement by Advisor
Total		**15**	

1st Year	Spring Semester		
	English Composition II Requirement (Note d)	3	3300:111 or equivalent
	Social Science Requirement	3	
3150:153	Principles of Chemistry II Lecture	3	3150:151
3150:154	Qualitative Analysis Lab	2	3150:152, prerequisite; 3150:153, corequisite
3450:199	Intro Seminar to Chemistry (Note a)	1	Recommended, not required
3450:221	Analytical Geometry Calculus I	4	3450:149 with C- or better
Total		**16**	

2nd Year	Fall Semester		
3150:263	Organic Chemistry I Lecture	3	3150:153
3150:265	Organic Chemistry I Lab	2	3150:154, prerequisite; 3150:263, corequisite
7700:101	Beginning Language I **-OR-** American Sign Language I (Note b)	4 **or** 3	
3450:222	Analytical Geometry Calculus II	4	3450:221 with C- or better
3650:261 or 3650:291	Physics for Life Sciences Lecture & Lab or Elementary Classical Physics I Lecture & Lab	4	3450:149 or higher, corequisite 3450:221 with C- or better
Total		**16-17**	

2nd Year	Spring Semester		
3150:264	Organic Chemistry II Lecture	3	3150:263
3150:266	Organic Chemistry II Lab	2	3150:265
7700:102	Beginning Language II **-OR-** American Sign Language II	4 **or** 3	Beginning Language I **or** 7700:101
3400:210 3400:221	*Humanities in the Western Tradition* ***-OR-*** *Humanities in the World Since 1300*	4	32 credits & 3300:112 or equivalent 32 credits & 3300:112 or equivalent
3650:262 **or** 3650:292	Physics for Life Sciences II Lecture & Lab **-OR-** Elementary Classical Physics II Lec and Lab	4	3650:261 3650:291
Total		**16-17**	

3rd Year	Fall Semester		
3150:305	Physical Chemistry for Biosciences (note c)	4	3150:264, 3450:222, 3650:262 or 3650:291
3150:423	Analytical Chemistry Lecture	3	3150:154 and 3150:263
3150:3/4xx	Upper Level Chemistry Electives (Note a)	3	
	Intermediate Language I		Beginning Language II

7700:201	**-OR-** American Sign Language III	3	**or** 7700:102
	Humanities Requirement	3	
Total		**16**	
3rd Year	**Spring Semester**		
3150:424	Analytic Chemistry II Lecture	3	3150:154 and 3150:263
3150:xxx	Upper Level Chemistry Elective (Note a)	2	
7700:202 7700:222	Intermediate Language II **-OR-** American Sign Language IV **-AND** Survey of Deaf Culture in America	3 **or** 3 2	Intermediate Language I **or** 7700:201 Sign Language students only
xxxx:3/4xx	Upper Level Electives	3	
	Social Science Requirement	3	
	Humanities Requirement	3	
Total		**17-19**	
4th Year	**Fall Semester**		
3150:380	Advanced Chemistry Lab I	2	3150:266
xxxx:3/4xx	Upper Level Chemistry Electives (Note a)	3	
xxxx:3/4xx	Upper Level Chemistry Electives (Note a)	4	
xxxx:3/4xx	Upper Level Chemistry Electives (Note a)	4	
	Area Studies/Cultural Diversity Requirement	2	
Total		**15**	
4th Year	**Spring Semester**		
xxxx:3/4xx	Upper Level Electives	2	
xxxx:3/4xx	Upper Level Electives	3	
xxxx:3/4xx	Upper Level Electives	4	
xxxx:3/4xx	Upper Level Electives	4	
	Area Studies/Cultural Diversity Requirement	2	
Total		**15**	

	Total Credits for Degree	**Min 128**	

ALERT: 1) By the end of your first 48 credit hours attempted, you must have completed your General Education English, Math, and Communications (Speech) requirements; 2) By the end of your first 48 credit hours attempted, you must have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

Student must obtain a grade of C- or better in all required chemistry courses. If a grade of less than C- is obtained in a required chemistry course, the student must successfully repeat the course within a year.

Notes:

a. Students pursuing the Bachelors of Arts in Chemistry must take at least 5 credits to fulfill the Upper Level Chemistry course requirements. 3150:199 Intro Seminar in Chemistry is strongly recommended.
3150:199 Intro to Seminar in Chemistry; 3150:381 Advanced Chemistry Laboratory II, 3150:399 Internship in Chemistry, 3150:401 Biochemistry Lecture I, 3150:402 Biochemistry Lecture II, 3150:463 Advanced Organic Chemistry, 3150:472 Advanced Inorganic Chemistry, 3150:480 Advanced Chemistry Laboratory III, 3150:497 Honors Project in Chemistry, 3150:498 Special Topics: Chemistry, 3150:499 Research Problems, 9871:401/501 Intro to Elastomers, 9871:402/502 Intro to Plastics, and/or 9871:407/507 Polymer Science.

b. Demonstration of ability to use another language by completion of the second year of a foreign language or sign language is required. See your advisor for placement. Please note that all four semesters must be completed in the SAME language and it's recommended you begin your first language class as soon as possible.

c. Students pursuing a Bachelors of Arts in Chemistry can choose to take 3150:305 Physical Chemistry for Biosciences, or 3150:313 and 314 Physical Chemistry Lecture I and II. 3150:313 is offered in the Fall and 3150:314 is offered in the Spring.

d. For English Composition I, 3300:111 (English Composition I) or 3300:113 (African-American Language and Culture I) are the recommended classes to the meet the General Education English requirement. 2020:121 (English) fulfills the English Composition I requirement. For English Composition II, 3300:112 (English Composition II) or 3300:114 (African-American Language and Culture II) are the recommended classes to the meet the General Education English requirement. 2020:222 (Technical Report Writing) fulfills the English Composition II requirement.

A student who plans to enter the Cooperative Education Program in chemistry should plan to take the foreign language in the first two years. Completion of the second year of a foreign language or demonstrated equivalent competence is required.

Analytic Geometry-Calculus III (3450:223) is a requirement for the B.S. in Chemistry and the B.S. Polymer Option; however, Analytic Geometry-Calculus III is NOT required for a B.A. in Chemistry.

Students pursuing a B.A. in Chemistry can take either Elementary and Classical Physics I & II (3650: 291 & 292) - OR- Physics for Life Sciences I & II (3650:261 & 262).

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GENERAL INFORMATION: Chemistry is one of the physical sciences and deals with the nature and properties of matter. Some of the major functions of chemists are:

1. To determine the properties and composition of matter
2. To investigate the laws that govern the combination of atoms and molecules.
3. To prepare new materials and find practical uses for them.

Nearly one-half of all chemists are engaged in research and development. Nearly one-fourth are engaged in management and administration. Many chemists are also involved in teaching, sales, and consulting. *The employment outlook for chemists is expected to be good in the next decade. Starting salary for an individual with a Bachelor of Science in Chemistry is in the $40,000 to $42,000 a year range. ***Source**: Chemical and Engineering News

The B.S. degree in chemistry is designed for a student intending to pursue graduate studies in chemistry or a related science or to pursue an industrial or governmental research career in chemistry. However, a person may wish to use a good chemical background for future work in fields that connect chemistry with other disciplines, e.g., technical sales, patent law, company management, and environmental sciences. Such a student needs, in addition to chemistry, courses in such topics as economics, business administration, chemical engineering, polymer science, biology, and statistics.

The student should be aware also that a good route to admission to medical, dental or other professional school is through a major in chemistry. A B.A. program in chemistry provides a unique background which should be attractive to medical schools in the selection process. In the B.A. program, the student can fulfill all of the prerequisites for medical school and still have a background which is somewhat biochemically-oriented. In addition the B.A. program can allow the student to be broadly educated in the humanities. Furthermore, should the student with a B.A. degree in chemistry eventually decide against a medical degree, his/her background will be adequate for application to most graduate schools in chemistry, biochemistry, pharmaceutical chemistry, material science, etc. The B.A. degree is not recommended for one wishing to pursue a research career in chemistry or biochemistry.

The present B.S. degree in chemistry requires 45 semester hours of chemistry courses. The B.A. program has fewer chemistry and math course requirements and includes more electives. In this way a graduate who is not research-oriented can still obtain a sound background.

PLACEMENT: A student is encouraged to check with his/her major department and with the Career Center, Student Union 211, regarding employment opportunities in the field.

COLLEGE OF ARTS & SCIENCES:
Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language or sign language and a minimum of 47 credits of 300/400 level courses (excluding workshops and General Education courses) consisting of either:

- Upper level (300/400) courses both in and outside the student's major
- Any courses outside the major department as specified in and approved by the student's major department chair (permission should be obtained prior to enrollment) except workshops and General Education courses

(3450:221, 222, 223, 235; 3650:291, 292 & Physics for Life Science will be counted towards the 47 credits)

TRANSFER TO COLLEGE OF ARTS & SCIENCES: Students should apply to the college upon the attainment of:

- ✓ a cumulative GPA of 2.0 or better (includes transfer coursework until 30 credits are earned at UA)
- ✓ a major GPA of 2.0 or better (includes transfer coursework until 30 credits are earned at UA)
- ✓ 30 credits completed including both required English composition courses and 3 credits of mathematics or statistics that meets the General Education requirement

Students can arrange inter-college transfers through an appointment with their academic advisor; advisor contact information is listed in "My Akron."

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