

## Program Pathway – *B.S. Chemistry: General Chemistry Pathway*

The General Chemistry track at Dalton State allows students to experience comprehensive learning opportunities geared towards their future in the chemical sciences. Students in the General Chemistry track will take classes in organic chemistry, physical chemistry, and quantitative analysis. Students will also be able to select major-related electives that align with their specific career goals. These experiences will give students in the General Chemistry track a broad background in the chemical sciences and prepare them for careers in private research companies, government agencies, local industry, higher education, and environmental science.

This map is a term-by-term sample course schedule. Highlighted courses have been identified as "key courses." It is strongly advised that students make every effort to pass these courses on the first attempt with a "C" or higher in order to be successful in this program. The milestones listed below each year are designed to keep you on course to graduate in four years. Missing milestones could prevent you from being eligible for a particular program or could result in a delay in graduation. The Program Pathway serves as a general guideline to help you build a full schedule each term.

<b>First Year – Fall</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
ENGL 1101 *	English Composition I	3	Minimum SAT/ACT/Accuplacer scores
MATH 1113	Precalculus	3	MATH 1111 or Minimum SAT/ACT/Accuplacer scores
CHEM 1211K	Principles of Chemistry I	4	MATH 1111 ('C' or higher) and ENGL 0999 unless exempt
BIOL 1107K	Principles of Biology I	4	ENGL 0999 unless exempt
PRSP 1050	Perspectives in STEM	1	
<b>Semester Total</b>		<b>15</b>	

<b>First Year – Spring</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
ENGL 1102 *	English Composition II	3	ENGL 1101 ('C' or higher)
MATH 2253	Calculus & Analytical Geometry I	4	MATH 1113
CHEM 1212K	Principles of Chemistry II	4	CHEM 1211K
COMM 1110	Fundamentals of Speech	3	
<b>Semester Total</b>		<b>14</b>	

<b>First Year Milestones</b>
<ul style="list-style-type: none"> <li>• Complete ENGL 1101, ENGL 1102, CHEM 1211K, &amp; CHEM 1212K</li> <li>• Complete Math 1113</li> <li>• Meet with your advisor</li> <li>• Explore career options</li> <li>• Consider concentrations in Industrial, Environmental, and Pre-health sciences chemistry</li> <li>• Become involved Chemist Honor Society</li> <li>• Earn job shadow opportunity</li> </ul>

Notes: \* denotes grade of 'C' or higher required

<b>Second Year – Fall</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
CHEM 2000	Scientific Communication (Fall only)	2	Co-req w/ CHEM 1212k
CHEM 3211K*	Organic Chemistry I	4	CHEM 1212K
MATH 2254	Calculus & Analytical Geometry II	4	MATH 2253
PHYS 1111K or 2211K	Introductory Physics I/Principles of Physics I	4	MATH 1111/MATH 2253
<b>Semester Total</b>		<b>15</b>	

<b>Second Year – Spring</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
CHEM 3212K*	Organic Chemistry II	4	CHEM 3211K
MATH 2255	Calculus & Analytical Geometry III	4	MATH 2254
Arts/ Humanities Elective	Subject options: ENGL, ARTS, HUMN, MUSC, THEA	3	varies
PHYS 1112K or 2212K	Introductory Physics II/ Principles of Physics II	4	PHYS 1111K/PHYS 2211K
<b>Semester Total</b>		<b>15</b>	

<b>Second Year Milestones</b>
<ul style="list-style-type: none"> <li>• Meet with your advisor</li> <li>• Complete Organic Chemistry Sequence</li> <li>• Complete all Calculus courses</li> <li>• If career path is undetermined, meet with Career and Professional Development office.</li> </ul>

<b>Third Year – Fall</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
CHEM 3311K *	Quantitative Analysis	4	MATH 1113, CHEM 1212K
STM Elective*	Subject options: BIOL, CMPS, MATH, SUST, CHEM	3-4	varies
Upper Level CHEM Elective*	Discuss with advisor	3	varies
English Elective	English Literature (ENGL 2xxx)	3	ENGL 1102 ('C' or higher)
POLS 1101	American Government	3	ENGL 0999 unless exempt
<b>Semester Total</b>		<b>15-16</b>	

Notes: \* denotes grade of 'C' or higher required

<b>Third Year – Spring</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
CHEM 3312K *	Instrumental Methods of Analysis (Spring only)	4	CHEM 3311K
STM Elective*	Subject options: BIOL, CMPS, MATH, SUST, CHEM	3-4	varies
Upper-Level CHEM Elective*	Discuss with advisor	3	varies
STM Elective*	Subject options: BIOL, CMPS, MATH, SUST, CHEM	3-4	varies
<b>Semester Total</b>		<b>13-15</b>	

<b>Third Year Milestones</b>
<ul style="list-style-type: none"> <li>• Meet with your advisor</li> <li>• Meet with assigned faculty mentor</li> <li>• Have completed resume or CV on file</li> <li>• Establish specific career goals and research necessary education/training</li> <li>• Research graduate school programs (if applicable)</li> </ul>

<b>Fourth Year – Fall</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
STM Elective*	Subject options: BIOL, CMPS, MATH, SUST, CHEM	3-4	varies
Social Sciences Elective	Subject options: ANTH, ECON, GEOG, HIST, PHIL, POLS, PSYC, SOCI	3	varies
Upper-Level CHEM Elective*	Discuss with advisor	3	varies
CHEM 3411K *	Physical Chemistry I (Fall only)	4	CHEM 1212K, MATH 2254, and PHYS 1112K or 2212K
HIST 2111 or 2112	United States History	3	ENGL 0999 unless exempt
<b>Semester Total</b>		<b>16-17</b>	

Notes: \* denotes grade of 'C' or higher required

<b>Fourth Year – Spring</b>			
<b>Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
CHEM 4000 *	Senior Seminar (Spring only)	2	12+ hrs of upper level CHEM courses
CHEM 4110K *	Advanced Inorganic Chemistry (Spring only)	4	CHEM 3212K, CHEM 3311K
CHEM 3412K *	Physical Chemistry II (Spring only)	4	CHEM 1212K, MATH 2254, and PHYS 1112K or 2212K
Social Sciences Elective	Subject options: ANTH, ECON, GEOG, HIST, PHIL, POLS, PSYC, SOCI	3	varies
Free Elective*	Discuss with advisor	3	
<b>Semester Total</b>		<b>16</b>	

<b>Fourth Year Milestones</b>
<ul style="list-style-type: none"> <li>• Submit Graduation Application to Office of Enrollment Services the semester before you intend to graduate</li> <li>• Meet with your faculty advisor</li> <li>• Polish resume or CV with Career Services</li> <li>• Submit Graduate School Applications and/or apply for jobs</li> </ul>

*The Program Pathway is not a contract, neither expressed or implied, between the student and Dalton State College, but represents a flexible program of the current catalog's curriculum which may be altered at any time to carry out the academic objectives of the College.*