



Program Pathway – B.S. Biology: Environmental Biology Concentration

The Environmental Sciences pathway at Dalton State provides students the appropriate background to pursue a variety of careers in the growing field of environmental science. Environmental science is a multidisciplinary field that integrates the biological, chemical, and physical sciences and seeks to understand how earth's systems function and how our environment and human health can be protected. Many environmental scientists work for local, state, or federal governments where they may conduct research or monitoring and advise on policy. Others work for companies providing scientific consulting services. Entry-level jobs may require only a bachelor's degree, while advancement may require a Master's degree. Careers in academia will typically require a doctoral degree.

Dalton State's Environmental Sciences pathway gives students a strong foundation in the sciences through its required courses in biology, chemistry, and physics and also allows students the freedom to choose from a diverse array of elective courses in a student's specific areas of interest. Students have the opportunity to participate in research and, thereby, gain skills which will serve them well in their environmental science careers.

Recommended minors: Environmental Sustainability, Chemistry, Geography, Business for Non-Business Majors, or Psychology

Many environmental scientists work for local, state, or federal governments where they may conduct research or monitoring and advise on policy. Others work for companies providing scientific consulting services.

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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.

First Year – Term 1			
Course Number	Course Title	Credits	Pre-requisites
ENGL 1101 *	English Composition I	3	Minimum SAT/ACT/Accuplacer scores/HS GPA
Free Elective*	MATH 1111 if needed	3	Minimum SAT/ACT/Accuplacer scores/HS GPA/
Social Science Elective	Approved Social Science Elective	3	ENGL 0999 unless exempt
BIOL 1107K	Principles of Biology I	4	
PRSP	Perspectives	1	
Semester Total		14	

First Year – Term 2			
Course Number	Course Title	Credits	Pre-requisites
ENGL 1102 *	English Composition II	3	ENGL 1101 ('C' or higher)
COMM 1110	Fundamentals of Speech	3	
BIOL 1108K	Principles of Biology II	4	BIOL 1107K
CHEM 1211K	Principles of Chemistry I	4	MATH 1111 w/ C or higher/ ACT/SAT Scores
MATH 1113	Pre-Calculus	3	Minimum SAT/ACT Scores / MATH 1111
Semester Total		17	ENGL 0999 unless exempt

First Year Milestones
<ul style="list-style-type: none"> • Complete ENGL 1101 & ENGL 1102 • Complete MATH 1113, BIOL 1107k & BIOL 1108K • Meet with your advisor. • Earn job shadow opportunity. • Begin long-term volunteer experience(s). Track through Roadrunner Serve.

Second Year – Term 1			
Course Number	Course Title	Credits	Pre-requisites
BIOL 3100*	Careers and Prof Deve in BIOL	1	BIOL 1108K
CHEM 1212K	Principles of Chemistry II	4	CHEM 1211k
BIOL 3500K*	Ecology	4	BIOL 1108K and CHEM 1211K
MATH 1401	Elementary Statistics	3	Minimum SAT/ACT/Accuplacer scores/HS GPA/
BIOL 2270	Ethical Issues in Science	2	BIOL 1108K
Semester Total		14	

Second Year – Term 2			
Course Number	Course Title	Credits	Pre-requisites
Social Science Elective	Approved Social Science elective	3	ENGL 0999 unless exempt
BIOL 3200K*	Cellular Biology	4	Prerequisites: BIOL 1108K, CHEM 1212K. Corequisites: CHEM 3211K
CHEM 3211K*	Organic Chemistry I	4	CHEM 1212K
POLS 1101	American Government	3	
MATH 3050* or MATH 2253*	Biological Statistics (spring only) or Calculus I	3-4	MATH 1401/MATH 1113
Semester Total		17-18	

Second Year Milestones
<ul style="list-style-type: none"> • Meet with your advisor • Have completed resume or CV on file in Hand Shake • If career path is undermined, meet with Career & Professional Development • Continue long-term volunteer experience(s)

Third Year – Term 1			
Course Number	Course Title	Credits	Pre-requisites
BIOL 3000*	Research Methods in Biology	3	BIOL 1108K, COMM 1110, MATH 1401
BIOL 3400K*	Genetics	4	BIOL 3200K, CHEM 3211K; co-req: CHEM 3212K
CHEM 3212K*	Organic Chemistry II	4	CHEM 3211K
PHYS 1111K	Introductory Physics I	4	ENGL 0999, MATH 1111
Semester Total		15	

Third Year – Term 2			
Course Number	Course Title	Credits	Pre-requisites
Free Elective*	Recommendation from advisor	3	
BIOL Upper-Level course*	See table below for options within the concentration	4	
PHYS 1112K	Introductory Physics II	4	PHYS 1111K
BIOL Upper-Level elective*	Recommendation from advisor	3	
Semester Total		14	

Third Year Milestones
<ul style="list-style-type: none"> • Meet with your advisor • Continue long-term volunteer experience(s)

Fourth Year – Term 1			
Course Number	Course Title	Credits	Pre-requisites
BIOL Upper-Level elective*	Recommendation from advisor	3	
BIOL 4250* or BIOL 4251*	Evolution or Human Evolution	4	BIOL 3400K, CHEM 1212K
BIOL Upper-Level elective*	Recommendation from advisor	1-2	
ENGL 2XXX	Literature Requirement	3	ENGL 1102 w/ C or higher
HIST 2111/2112	U.S. History	3	ENGL 0999 unless exempt
Semester Total		14-15	

Fourth Year – Term 2			
Course Number	Course Title	Credits	Pre-requisites
BIOL 4000*	Senior Seminar	2	19 hours of 3/4000 level BIOL courses
2 BIOL Upper-Level courses*	See table below for options within the concentration	6	
BIOL Upper-Level course*	See table below for options within the concentration	3	
Area C HUMN	ARTS 1100, HUMN 1201, HUMN 1202, MUSC 1100, MUSC 1110, MUSC 1120, or THEA 1100	3	
Semester Total		14	

Fourth Year Milestones

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| <ul style="list-style-type: none"> • Submit Graduation Application to Office of Enrollment Services • Meet with your advisor |
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Notes:

* denotes grade of 'C' or higher required

Must make a C or better in all upper level courses

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.

BIOL Upper-Level Electives – Environmental Concentration

BIOL upper-level electives – at least 22 hours		
Choose at least 14 credit hours from the courses below.		
Course #	Description	Hours
BIOL 3340K	General Microbiology	4
BIOL 3510K	Plant Biology	4
BIOL 3520K	Invertebrate Zoology	4
BIOL 3530K	Freshwater Ecology	4
BIOL 3550	Conservation Biology	3
BIOL 3600K	Ornithology	4
BIOL 3650K	Herpetology	4
BIOL 3700	Field Biology Techniques	3
BIOL 4275	Bioremediation	3
BIOL 4500K	Biotechnology	4
BIOL 4600	Ecotoxicology	3
BIOL 4700	Microscopy	3
If fewer than 22 hours are selected from the list above, select the remaining hours from the courses below.		
Course #	Description	Hours
BIOL 3150	Science and Society	3
BIOL 3900	Readings in Biology	2
BIOL 4800	Service Learning in Biology	1-2
BIOL 4860	Internship in Biology	1-4
BIOL 4900	Special Topics in Biology	3
BIOL 4960	Research in Biology	1-3
CHEM 3311K	Quantitative Analysis	4
CHEM 3312K	Instrumental Methods	4
CHEM 3700K	Environmental Chemistry	4
MATH 2253	Calculus and Analytic Geometry I	4
MATH 3050	Biological Statistics	3
SUST 3000+	Any 3000-4000 SUST except SUST 4000	3
Free electives (6 hours)		
Choose any classes that give transfer credit to fill these hours		

BIOL Upper-Level Electives – General Concentration

BIOL upper-level electives – at least 22 hours		
Choose at least 14 credit hours from the courses below.		
Course #	Description	Hours
BIOL 3340K	General Microbiology	4
BIOL 3510K	Plant Biology	4
BIOL 3520K	Invertebrate Zoology	4
BIOL 3530K	Freshwater Ecology	4
BIOL 3550	Conservation Biology	3
BIOL 3600K	Ornithology	4
BIOL 3650K	Herpetology	4
BIOL 3700	Field Biology Techniques	3
BIOL 3850	Neuroscience	3
BIOL 4100	Immunology	3
BIOL 4200	Pathology	3
BIOL 4251	Human Evolution	3
BIOL 4275	Bioremediation	3
BIOL 4300	Epidemiology	3
BIOL 4360K	Comparative A & P	4
BIOL 4410K	Molecular Biology	4
BIOL 4500K	Biotechnology	4
BIOL 4600	Ecotoxicology	3
BIOL 4700	Microscopy	3
If fewer than 22 hours are selected from the list above, select the remaining hours from the courses below.		
Course #	Description	Hours
BIOL 3150	Science and Society	3
BIOL 3900	Readings in Biology	2
BIOL 4800	Service Learning in Biology	1-2
BIOL 4860	Internship in Biology	1-4
BIOL 4900	Special Topics in Biology	3
BIOL 4960	Research in Biology	1-3
CHEM 3311K	Quantitative Analysis	4
CHEM 3312K	Instrumental Methods	4
CHEM 3500	Biochemistry	3
CHEM 3700K	Environmental Chemistry	4
CHEM 4120	Drug Action and Design	3
MATH 2253	Calculus and Analytic Geometry I	4
MATH 3050	Biological Statistics	3
Free electives (6 hours)		
Choose any classes that give transfer credit to fill these hours		

BIOL Upper-Level Electives – Pre-Health Concentration

BIOL upper-level electives at least 22 hours		
Choose at least 14 credit hours from the courses below.		
Course #	Description	Hours
BIOL 2251K	A&P I	4
BIOL 2252K	A&P II	4
BIOL 3340K	General Microbiology	4
BIOL 3850	Neuroscience	3
BIOL 4100	Immunology	3
BIOL 4200	Pathology	3
BIOL 4251	Human Evolution	3
BIOL 4300	Epidemiology	3
BIOL 4360K	Comparative A & P	4
BIOL 4410K	Molecular Biology	4
BIOL 4500K	Biotechnology	4
BIOL 4700	Microscopy	3
BIOL 4850K	Human Dissection	4
If fewer than 22 hours are selected from courses above, select the remaining hours from the courses below.		
Course #	Description	Hours
BIOL 3150	Science and Society	3
BIOL 3900	Readings in Biology	2
BIOL 4800	Service Learning in Biology	1-2
BIOL 4860	Internship in Biology	1-4
BIOL 4900	Special Topics in Biology	3
BIOL 4960	Research in Biology	1-3
CHEM 3500	Biochemistry	3
CHEM 4120	Drug action and Design	3
MATH 2253	Calculus and Analytic Geometry I	4
MATH 3050	Biological Statistics	3
Free electives (6 hours)		
Choose any classes that give transfer credit to fill these hours		