



# Biological Sciences- Associate in Science (2021-2022 Catalog)

## SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion

Plans can be modified to fit student needs by adding more semesters

**Choose your courses with your Advisor.**

<b>Developmental Education Courses (if required)</b>				<input type="checkbox"/>	MATH020	Pre-Algebra
<input type="checkbox"/>	ACLS050	Introduction to Academic Literacy	<input type="checkbox"/>	MATH022	Elementary Algebra	
<input type="checkbox"/>	ENGL027	Writing Skills Workshop	<input type="checkbox"/>	MATH026	Intermediate Algebra	

Location: B= BETH, M= MROE, S=SBTH, E= ESTN, D= DIST \*subject to change

complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
Semester 1	<input type="checkbox"/>	COLS101	College Success	1		B, M, D	----	B, M, D	D
	<input type="checkbox"/>	BIOS107	Biology I	4	Science	B,M	----	B,M	M
	<input type="checkbox"/>	CHEM120	General Chemistry I	4		B, M	----	B, M	M
	<input type="checkbox"/>	ENGL101	English I	3	Comm.	B, M, D, E	----	B, M, D, E	B, M, D
	<input type="checkbox"/>	MATH140 or MATH180	College Algebra or Calculus I	3 or 4	QL	B, M, D	----	B, M, D	B, M, D
		Total Semester Credits:	15/16						
Semester 2	<input type="checkbox"/>	BIOS150	Biology II	4	Science	B, M	----	B, M	M
	<input type="checkbox"/>	CHEM220	General Chemistry II	4	Science	M	----	B, M	B,M
	<input type="checkbox"/>	CMTH102	Introduction to Communication	3	Comm.	B, M, D	----	B, M, D	B, M, D
	<input type="checkbox"/>	ENGL151L	English II (Literature) (D)	3	Comm.	B, M, D	----	B, M, D	B, M, D
	<input type="checkbox"/>	MATH145 or MATH181	Trigonometry or Calculus II	3 or 4	QL	B, M, D	----	B, M, D	B, M, D
		Total Semester Credits:	17/18						
Semester 3	<input type="checkbox"/>	BIOS2__	Biology Elective	4	Science	Depends on the course selected			Depends on the course selected
	<input type="checkbox"/>	CHEM201G	Organic Chemistry I (WI)	4	Science	B, M	----	M	PRE: CHEM220 and ENGL101
	<input type="checkbox"/>	PSYC103	Introduction to Psychology	3	SSHB	B, M, D	D	B, M, D	B, M, D
	<input type="checkbox"/>		SIT General Education Elective	3	SIT	B, M, D	D	B, M, D	B, M, D
		Total Semester Credits:	14						
Semester 4	<input type="checkbox"/>	BIOS2__	Biology Elective	4	Science	Depends on the course selected			Depends on the course selected
	<input type="checkbox"/>	CHEM251	Organic Chemistry II	4	Science	M	----	B, M	----
	<input type="checkbox"/>		AH General Education Elective	3	AH	B, M, D	D	B, M, D	B, M, D
	<input type="checkbox"/>		Elective	3		B, M, D	D	B, M, D	B, M, D
	<input type="checkbox"/>		Elective	3		B, M, D	D	B, M, D	B, M, D
		Total Semester Credits:	17						
		Total Degree Credits	63-65						

General Education Requirements		
<input type="checkbox"/>	ENGL151L	Diversity
<input type="checkbox"/>	CHEM201G	Writing Intensive
<input type="checkbox"/>		Writing Intensive

\*Biology electives: Students are required to take two of four Biology courses of 206 (General Ecology), 210 (Environmental Biology), 240 (Microbiology) or 260 (Genetics).

◦For students with an Environmental Science intent, BIOS 206 and BIOS 210 are recommended

◦For students with an Integrative Biology intent, BIOS 260 and either BIOS 206 or BIOS 210 are recommended

Some recommended electives are GEOG 121, GEOG 140, SOCA103, BIOS126, BIOS210, GEOG 210, HUMA150, CHEM260, HEAL150, NUTR105, PHYS 101.

**It is the student's responsibility to be knowledgeable of NCC graduation requirements and to verify transfer requirements with the 4-year institution. Courses listed on the program map are based upon the assumption that prerequisites and courses taken in previous semesters will be successfully completed**

Arts & Humanities (AH)
ARTA 100 Art and Visual Thinking
ARTA 101 Art History Survey
CMTH 110 Introduction to the Theatre
CMTH 111 Acting I
CMTH 115 Technical Theatre
CMTH 117 Stagecraft
CMTH 126 The Communication Arts
CMTH 189 Stage Voice and Movement
CMTH 190 Stage Production
CMTH 206 Directing
CMTH 211 Plays: Classical to Contemp. (G-WI)
CMTH 212 Acting II
CMTH 218 Theatre Portfolio
CMTH 220 Introduction to Film
CMTH235 Understanding Culture Through Film
DANC 101 Dance History
DANC 110 Ballet I
DANC 120 Modern Dance I
DANC 130 Jazz I
DANC 210 Ballet II
DANC 220 Modern Dance II
DANC 230 Jazz II
ENGL 201 British Literature I (G-WI)
ENGL 203 Shakespeare (G-WI)
ENGL 205 American Literature I (G-WI)
ENGL 211 Plays: Classical to Contemp. (G-WI)
ENGL 215 Multicultural Adolescent Lit (G-WI)
ENGL 250 Latin American Literature (G-WI)
ENGL 251 British Literature II (G-WI)
ENGL 253 Creative Writing
ENGL 255 American Literature II (G-WI)
ENGL 256 Modern Poetry (G-WI)
ENGL 257 20th Century Lit by Women (G-WI)
ENGL258 Fiction Writing
ENGL 260 Contemporary Literature (G-WI)
ENGL 264 Irish Literature (G-WI)
ENGL 265 African-American Literature (G-WI)
ENGL 267 Poetry Writing
HUMA 121 The American Work Experience (G-WI)
HUMA 140 Intro to Women & Gender Studies (G-WI)
HUMA 150 Nature of the Environment
HUMA210 Creativity and the Origin of Ideas
JOUR 101 Journalism and Society
Modern Language - All MDLA Courses
MUSC 101 Introduction to Music
PHIL 111 On Death and Dying (G-WI)
PHIL 121 World Religions
PHIL 201 Introduction to Philosophy
PHIL 202 Ethics and Moral Problems (G-WI)
PHIL 204 Asian Philosophies
PHIL 211 Ancient Philosophy
PHIL 215 Modern Philosophy
PHIL220 Existentialism
PHIL 225 What is Freedom?

Societies & Institutions Over Time (SIT)
ARCH 155 Architectural History II 1870-Present (AAS ONLY)
CMTH 221 History of Broadcasting
GEOG 101 World Geography
GEOG 151 Geography of the U.S. and Canada (G-WI)
GLBL 130 Intro to Global Studies
GLBL 160 Field Experience & Acad Research in GS
GLBL 230 Global Studies Capstone
HIST 103 Ancient and Medieval History
HIST 113 American History I (G-WI)
HIST 121 The Black Experience (G-WI)
HIST 123 African Civilization
HIST 140 Modern Chinese History
HIST 153 Found of Mod Euro History, 1300-1815 (G-WI)
HIST 163 American History II
HIST 165 The American Experience of Warfare (G-WI)
HIST 166 Civil War and Reconstruction (G-WI)
HIST 168 History of the Middle East (G-WI)
HIST 173 Mod European History, 1815 to Present (G-WI)
HIST 183 Modern American History 1945-Present
HIST 210 History of Mod Science, 1859 to Present
HIST 211 History of Pennsylvania
INTS 201 Implementing Sustainable Energy System...
INTS 202 The Architecture of the City: Classic to Contemp.
POLS 101 Introduction to Political Science
POLS 105 American Constitutional Law (G-WI)
POLS 110 American National Government (G-WI)
POLS 150 Peace Studies & Conflict Resolution (Study Abroad)
POLS 170 Politics of Modern Turkey (Study Abroad)
POLS 202 International Relations
POLS 205 Women and Politics (G-WI)
POLS 251 State and Local Government (G-WI)
SOCA 102 Cultural Anthropology (G-WI)
SOCA 105 American Ethnicity
SOCA 160 Issues in Contemp.Genocide & Mass Violence

Biology Electives
BIOS206 General Ecology PRE: BIOS107 & 150
BIOS210 Environmental Biology PRE: BIOS107
BIOS240 Microbiology PRE: BIOS150 & CHEM120
BIOS260 Genetics PRE: BIOS150 & CHEM220
Availability:
BIOS206: FA- BETH, MROE
BIOS210: SP-BETH, MROE
BIOS240: FA- MROE; SP-BETH, MROE
BIOS260: FA-BETH, SP-MROE

Electives for A.A. & A.S. Degrees
Accounting – only ACCT 100, 101, 151, 201, 202, 251
Architecture – only ARCH 100
Art – only ARTA 101, 111, 162, 291, 292, 293
Biological Science – all BIOS except 281, 282, 283
Business – only BUSA 101, 115, 152, 201, 202, 205, 232, 272
Chemistry – only CHEM 105, 120, 135, 220, 225, 251, 260, 291, 292, 293, 294
College Success: COLS101, 120
Communications – all CMTH except 180, 182, 185, 240, 252
Computer/Information Science – only CISC 101, 104, 115, 125, 225, 230, 270
Counseling – only COUN 100, 291, 292, 293
Dance – all DANC
Economics – ECON201, 251G
Education – all EDUC except 105
Engineering – only ENGG 100, 191, 192, 193, 194, 201, 251, 252
English – all ENGL
Geography – all GEOG
Global Studies - GBLB130, 160, 230
Health – only HEAL 150
History – all HIST
Hospitality – only HOSP 101
Humanities – all HUMA
Interdisciplinary Studies – INTS 101, 202, 250
Journalism – only JOUR 104
Mathematics – only MATH 120, 140, 145, 150, 160, 165, 175, 176, 180, 181, 191-194, 202, 210, 211
Modern Language – all MDLA
Music – all MUSC
Nutrition- NUTR105
Philosophy – all PHIL
Physical Education – any PHED courses up to a max of two credits
Physics – all PHYS
Political Science – all POLS
Publishing- 101, 102
Psychology – all PSYC except 221
Sociology/Anthropology – all SOCA
Special Education – SPED 160

Recommended electives are GEOG 121, GEOG 140, SOCA103, BIOS126, BIOS210, GEOG 210, HUMA150,

Writing Intensive Gen Ed Courses (WI)
BIOS105G Contemporary Biology
CMTH 211G Plays: Classical to Cont
ENGL 201G British Literature I
ENGL 203G Shakespeare
ENGL 205G American Literature I
ENGL 211G Plays: Classical to Contemporary
ENGL 215G Multicultural Adolescent Literature
ENGL 250G Latin American Literature
ENGL 251G British Literature II
ENGL 255G American Literature II
ENGL 256G Modern Poetry
ENGL 257G 20th Century Lit by Women
ENGL 260G Contemporary Literature
ENGL 264G Irish Literature
ENGL 265G African-American Literature
GEOG 121G Environmental Sustainability
GEOG 151G Geography of the US & Canada
HIST 113G American History I
HIST 121G The Black Experience
HIST 153G Found of Mod Euro Hist (1300-1815)
HIST 165G The American Experience of Warfare
HIST 166G Civil War and Reconstruction
HIST 168G History of the Middle East
HIST 173G Mod Euro History, 1815 to Present
HUMA 121G The American Work Experience
HUMA 140G Intro to Women & Gender Studies
HUMA250G Research Methods in the Social Sciences
PHIL 111G On Death and Dying
PHIL 202G Ethics and Moral Problems
POLS 105G American Constitutional Law
POLS 110G American National Government
POLS 205G Women and Politics
POLS 251G State and Local Government
PSYC 103G Introduction to Psychology
PSYC 258G Developmental Psychology
SOCA 102G Cultural Anthropology
SOCA 103G Principles of Sociology
SOCA 125G Sociology of Families

**Note: One elective course must be writing intensive.** General Education courses offered as writing intensive are noted with a G-WI

For example: HIST113 is not writing intensive, but HIST113G is writing Intensive

**Notes:**

To plan the correct sequence, be aware that these electives are not offered at both campuses each semester:

- BIOS 206: FA-BETH, MROE;                      -BIOS 240: FA-MROE, SP-BETH, MROE;
- BIOS 210: SP-BETH, MROE;                    -BIOS260: FA-BETH, SP-MROE

**Program Narrative:**

- Are you interested in pursuing a bachelor's degree in Biological Science? Are your career goals in the area of medicine or scientific research? Northampton's Biological Science program is an affordable way to start. With a curriculum that parallels the first two years of most four-year programs, NCC can save you thousands of dollars on your undergraduate degree.
- NCC's program can be customized to prepare you for the range of majors and fields that are based in biological sciences, including environmental sciences, genetics, molecular biology and more. By working closely with an advisor, you can choose the right electives, and stay on track with the requirements of the transfer college of your choice.

**Program Requirements:**

- We expect you to have an adequate background in chemistry and algebra. If you need to develop this background, you may take the necessary preparatory classes prior to, or during your first semester.

**Program Learning Outcomes:** Graduates of the program will:

- Understand fundamentals concepts of Biology, which characterize the various life science fields including Botany, Environmental Science, Genetics, Cellular and Molecular Biology and Zoology.
- Demonstrate oral and written communication skills necessary for sharing discipline-specific knowledge and communicating professionally.
- Conduct scientific inquiry and research on biological science topics as they relate to science, technology and society.
- Proficiently function in laboratory and field settings, using modern scientific instrumentation, including microscopes, measuring devices and computer technology.
- Demonstrate understanding of the fundamentals of lab safety, to ensure both personal and environmental safety.
- Understand the use of the scientific method, interpretation of scientific data and scientific literature.
- Be prepared to transfer to a four-year Bachelor's Program or a pre-med, pre-vet or other pre-professional programs.

**Transfer Information:**

- NCC has dual admissions agreements with a variety of colleges. These arrangements enable you to have admission to Northampton and the four-year institutions you select
- NCC offers transfer agreement with Pennsylvania State University-Berks/Lehigh Valley and State University of New York College of Environmental Sciences and Forestry.
- NCC students have transferred to Cedar Crest College, East Stroudsburg University, Florida Institute of Technology, Kutztown University, Millersville University, Moravian College Pennsylvania State University, Rochester Institute of Technology, Temple University, University of Colorado, West Chester University, Many others nationwide.

**Career Information:** Completion of the Biological Sciences program leads to transfer degrees in: Research, Teaching, Medicine, Forestry Management, Biotechnology, Pharmaceutical Technology, Environmental Studies, and Veterinary Medicine.