



Transfer Articulation Guide

Middlesex Community College AS Biotechnology Technician to Northeastern University College of Professional BS Biotechnology

Middlesex Community College, AS in Biotechnology Technician Courses			Northeastern University College of Professional Studies, BS in Biotechnology Equivalencies		
Semester 1 – Fall (15 credits)					
BIO 131	General Biology	4	BIO 1100 + BIO 1101	Principles of Biology I + Lab	4
CHE 121 <i>or</i> CHE 131 Take either	Introduction to Chemistry <i>or</i> College Chemistry I	4	CHM 1100 + CHM 1101	General Chemistry I + Lab	4
TMA 100	Math for Technology	3	MTH 1990	MTH Elective	3
ENG 101	English Composition I	3	ENG 1105 + ENG 1106	College Writing 1 + Lab	3
Semester 2 – Spring (17 credits)					
BIT 150	Methods of Biotechnology	4	BTC 1300 + BTC 1990	Introduction to Biotechnology + BTC Elective	4
BIT 155	Quality Control and Good Manufacturing Practices	3	BTC 4450	Quality Control and Validation Issues	3
BIO 240	Microbiology for Industrial Applications	4	BIO 2100 + BIO 2101	Microbiology + Lab	4
ENG 102	English Composition II	3	ENG 1107 + ENG 1108	College Writing 2 + Lab	3
CAP 103, CSC 101, <i>or</i> CSC 151 Take CAP 103	Computers for Technology	3	ITC 1000	Computer Applications	3
Semester 3 – Summer (7 credits)					
BIT 250	Advanced Techniques in Biotechnology	4	BTC 4300 + BTC 4990	Biotechnology and Pharmaceutical Processing + BTC Elective	4
<i>Behavioral Science Elective</i> Take SOC 101	Introduction to Sociology	3	SOC 1100	Introduction to Sociology (SI Core)	3
Semester 4 – Fall (10 credits)					
BIT 225	Special Topics in Biotechnology	3	BTC 2990	BTC Elective (<i>Major Elective</i>)	3
BIO 250	Immunology	4	BTC 2990	BTC Elective (<i>Major Elective</i>)	4
BIT 200	Internship	3	BTC 1990	BTC Elective (<i>Major Elective</i>)	3

Semester 5 – Spring (17 credits)					
BIO 255	Molecular Biology	4	BIO 2500 + BIO 2501	Genetics & Molecular Biology + Lab	4
CHE 160	Principles of Biochemistry	4	BIO 3100 + BIO 3101	Biochemistry + Lab	4
MAT 177	Statistics	3	MTH 2310	Statistics for the Social and Behavioral Sciences	3
ETH 105	Introduction to Bioethics	3	PHL 2130	Ethical Issues in Healthcare (waive PHL 2140)	3
ECO 120	Economics and Management in High-Tech Industry	3	ECN 1990	ECN Elective	3

BS in Biotechnology Courses to be taken at CPS

General Foundation			
Course Number	Title	Credits	Pre-Requisites
ENG 3105	Writing for the Professions-Sci and Eng	3	ENG 1105 + ENG 1106 ; co-requisite ENG 3106
ENG 3106	Lab for Writing for the Professions-Sci and Eng	1	ENG 1105 + ENG 1106; co-requisite ENG 3105
DD Core See list below	Engaging Difference and Diversity	3	
IC Core See list below	Interpreting Culture	3	
EI Core See list below	Exploring Creative Expression and Innovation	3	
General Foundation Total		13	
Major Foundation			
MTH 2100	Calculus I	3	MTH 1200
MTH 2105	Calculus II	3	MTH 2100
BIO 1200 + BIO 1201	Principles of Biology 2 + Lab	4	BIO 1100 + BIO 1101
CHM 1200 + CHM 1201	General Chemistry 2 + Lab	4	CHM 1100 + CHM 1101
PHY 1200 + PHY 1201	Physics I + Lab	4	MTH 2100
PHY 2200 + PHY 2201	Physics II + Lab	4	MTH 2100
Major Foundation Total		22	
Major Required Courses			
CHM 2110 + CHM 2111	Organic Chemistry 1 + Lab	4	CHM 1200 + CHM 1201
CHM 2210 + CHM 2201	Organic Chemistry 2 + Lab	4	CHM 2110 + CHM 2111
CHM 2300 + CHM 2301	Analytical Chemistry + Lab	4	CHM 1200 + CHM 1201
BIO 2300	Cell Biology	3	BIO 1200 + BIO 1201
BTC 4850	Biological Sciences Senior Project	3	BIO 2300 and BIO 2500
Major Required Courses Total		18	
Major Electives Total		0	
Open Electives Total		4	
Credits to be taken at CPS		57	
Total Credits required for CPS BS Biotechnology		123	

Students have the option to take a course that can satisfy more than one core (NU Path) requirement. Courses that are highlighted below satisfies more than one NU Path requirement. Students are still required to earn a minimum of 123 credits (through transfer and course completion at CPS) for the degree.

DD Core Course Options as of March 13, 2017

Course Number		Title	Prerequisite
CMN	1100	<u>Organizational Communication</u>	
CMN	3340	<u>Gender and Communication</u>	CMN 1100, CMN 1103, or CMN 2210
ESC	1250	<u>The Environment and Society</u>	
HST	1200	<u>American History 1: Precontact to the Civil War</u>	
HST	1250	<u>American History 2: Reconstruction to the Present</u>	
HST	2125	<u>Twentieth-Century World Wars</u>	
HST	2150	<u>The World Since 1945</u>	
HST	2425	<u>Coming to America: The American Immigrant Experience</u>	
MGT	2310	<u>Organizational Behavior</u>	HMG 1100 or MGT 1100
SOC	1210	<u>Sociology of Boston</u>	
SOC	1220	<u>Engaging Difference and Diversity</u>	
SOC	1230	<u>Race and Ethnicity</u>	
SOC	2340	<u>Gender and Work Roles</u>	SOC 1100

IC Core Course Options as of March 13, 2017

Course Number		Title	Prerequisite
ANT	1150	<u>Cultural Anthropology</u>	
ART	1145	<u>American Cinema</u>	
CMN	1100	<u>Organizational Communication</u>	
ENG	2230	<u>English Literature 1</u>	ENG 1103 or ENG 1105
ENG	2231	<u>English Literature 2</u>	ENG 2230
ENG	2450	<u>American Literature 1</u>	ENG 1103 or ENG 1105
ENG	2451	<u>American Literature 2</u>	ENG 2450
ENG	3440	<u>Western World Literature</u>	ENG 2231 or ENG 2451
ENG	4455	<u>Topics in Shakespeare</u>	ENG 1107
HST	1100	<u>History of the World 1: Prehistory to the Renaissance</u>	
HST	1150	<u>History of the World 2: From Renaissance to the Present</u>	
HST	2450	<u>History of International Sport</u>	
POL	3210	<u>Nationalism</u>	POL 1200
SOC	1220	<u>Engaging Difference and Diversity</u>	
SOC	1230	<u>Race and Ethnicity</u>	
SOC	2100	<u>Popular Culture</u>	
SOC	2340	<u>Gender and Work Roles</u>	SOC 1100

EI Core Course Options as of March 13, 2017

Course Number		Title	Prerequisite
ART	1200	<u>Digital Photography</u>	
ART	2000	<u>Typography: Communicating Content with Form</u>	
ART	2100	<u>Foundation in Visual Communication</u>	
ENG	3210	<u>Writing for Young Readers</u>	ENG 1107
ENG	3220	<u>Writing Poetry</u>	ENG 1107
ENG	3240	<u>Writing Nonfiction</u>	ENG 1107
ENG	4210	<u>Writing for Publication</u>	ENG 3105 or ENG 3107
ESC	3100	<u>Introduction to Geographical Information Systems</u>	ESC 1100 or ESC 1150
GET	1150	<u>Foundations of Engineering Graphics and Design</u>	
ITC	2400	<u>Web and Mobile Development</u>	
ITC	3400	<u>Web Design and Multimedia</u>	ITC 2400
MGT	4230	<u>New Venture Creation</u>	MGT 4210, ENG 3107, and ENG 3108