

Exhibit 5

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Biochemistry

MCCC Associate in Science Biology

USciences Bachelor of Science Biochemistry

MCCC Courses	Cr.	USciences Courses	Cr.
ENG101 English Composition I	3	WR101 Writing & Rhetoric I	3
ENG102 English Composition II	3	WR102 Writing & Rhetoric II	3
CMN112 Public Speaking	3	CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I <i>(serves as Technical Elective)</i>	4	MA122 Calculus I	4
CHE101 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I <i>(serves as Technical Elective)</i>	5	CH211 Principles of Organic Chemistry I CH213 Principles of Organic Chemistry Lab I	3 1
CHE202 Organic Chemistry II <i>(serves as Technical Elective)</i>	5	CH212 Principles of Organic Chemistry II CH214 Principles of Organic Chemistry Lab II	3 1
BIO101 General Biology I	4	BS132 Introductory Biology I BS134 Introductory Biology I Lab [BS130 Introductory Biology I for students transferring prior to Fall 19]	3 1
BIO102 General Biology II	4	BS133 Introductory Biology II BS135 Introductory Biology II Lab [BS131 Introductory Biology II for students transferring prior to Fall 19]	3 1
BIO201 Microbiology <i>(serves as Biology Elective)</i>	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19] <i>(serves as Biochemistry Program Elective)</i>	3 1
Biology Elective Choose One: BIO201 Microbiology BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	<i>(serves as Free Elective)</i> BS243&244 Microbial Science + Lab BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4

Social Science GenEd Elective Choose One	3	<i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One : HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	58
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY115 University Physics I	4	PY211 Introductory Physics I	4
PHY215 University Physics II	4	PY212 Introductory Physics II	4
MAT152 Calculus II	4	MA221 Calculus II	4
Total MCCC Credits	74	Total Credits Accepted	70

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in all science and mathematics courses (Prefixes: CHE, MAT, PHY, BIO). Students who do not meet these minimum grade requirements can still transfer under the terms of this articulation agreement, subject to departmental review and approval.

The courses encompassed in the A.S. degree from MCCC must be completed within the three years preceding matriculation at USciences. Students who take more than 3 years to complete the A.S. degree can still transfer under this articulation agreement, subject to departmental review and approval.

CH120-Orientation for the Chemical Sciences (1 cr) will be waived for students transferring to USciences after earning the A.S. in Biology. However, the total credits required for graduation (includes transfer credits) will remain unchanged.

Graduation from USciences with a BS degree requires completion of specified courses and a total of 120-136 credit hours, depending upon the degree program. In order to enter USciences with U3 (junior) status and to facilitate the completion of a BS degree in two years of study at USciences, all students are strongly advised to complete more than 60 total credits of course work which is eligible for transfer to USciences. Students interested in transferring to USciences are strongly urged to contact the USciences Admission Office early in their enrollment at MCCC for advising.

In addition to the coursework provided in the above table, the following types of courses will be needed to complete the *General Education Discipline Requirements* in USciences' General Education Curriculum:

- 3 credits in Social Sciences
- 6 credits in Humanities

Some or all of these 9 credits of coursework can be taken at MCCC or after transferring to USciences (currently included in the 3rd and 4th year at USciences). If the 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO</p> <p>MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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Suggested checklist for 3rd and 4th year at USciences based on current approved curriculum:
(this checklist is for planning purpose only and it is subject to changes; it does not constitute a contract)

THIRD YEAR AT USCIENCES		
CH 331	Basic Inorganic Chemistry	3
ST310 or MA222	Intro to Biostatistics or Calculus III	3/4
CH 320	Essentials of Physical Chemistry	4
CH 366	Principles of Analytical Chemistry	3
CH 367	Analyt and Phys Methods Lab I	1
CH 341	Molecular Structure Biochemistry	3
CH 300	Discussions in Chemistry	1
CH 404	Literature of Chemistry	1
CH 343	Intermediary Metabolic Chemistry	3
CH 444	Biochemistry Laboratory I	1
CH 445	Biochemistry Laboratory II	1

FOURTH YEAR AT USCIENCES		
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
BS 461 or BS 306	Cell Biology	4
	Human Molecular and Cellular Biology	3
	GenEd Social Sciences Requirement	3
CH 402	Seminar in Chemistry II	1
CH 342	Nucleic Acid Biochemistry	3
BS 466	Genetics	4
	GenEd Humanities Requirement	6
	Biochemistry Program Elective	2

Progress in Completing USciences' General Education Curriculum

[For the most recent information, see the current USciences Catalog on its website]

Discipline Requirements (minimum of 41 credits)

Discipline Requirement	Community College Courses // USciences Courses*
Natural Science (ONE semester of lab required) 7 credits	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective Choose One USciences Course: PO (Political Science), PS (Psychology), SO (Sociology), AN (Anthropology), SS (Social Sciences), EC (Economics), CO (excluding CO 101 and CO 204)
Humanities 6 credits	Choose Two USciences Courses: AC (Arabic), AR (Art), CI (Chinese), CA (Classics), EN (excluding EN 101 and EN 102), FR (French), GE (German), LA (Latin), HI (History), HU (Humanities), MU (Music), PL (Philosophy), RS (Religious Studies), SP (Spanish), WC (World Cultures)
Multidisciplinary Inquiry 6 credits (may be substituted by Social Sciences &/or Humanities courses)	Choose One: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

Skills, Values, and Attitudes (one approved course for each)

Skills, Values, and Attitudes	Community College Course	USciences Course [RED = courses taken after transferring to USciences]
Ethics		CH 300
Information Literacy	BIO102	CH 404
Oral Communication		CH 401
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication		CH 423

Skills requirement is usually fulfilled by taking courses that satisfy discipline requirements that are also approved for one or more GenEd skill.