

Exhibit 13

TRANSFER ADVISING GUIDE

Brookdale Community College (Brookdale) to University of the Sciences in Philadelphia A.S. Science Option, Mathematics/Science → B.S. Pharmaceutical Sciences

Brookdale Associate in Science Science Option

USciences Bachelor of Science Pharmaceutical Sciences

Brookdale Courses	Cr.	USciences Courses	Cr.
ENGL121 English Composition: The Writing Process	3	WR101 Writing & Rhetoric I	3
ENGL122 English Composition: Writing and Research	3	WR102 Writing & Rhetoric II	3
MATH153 Pre-calculus Mathematics	4	MA107 Pre-calculus	3
MATH171 Calculus I	4	MA122 Calculus I	4
MATH172 Calculus II	4	MA221 Calculus II <i>(serves as Elective)</i>	4
BIOL101 General Biology I (serves as Career Studies)	4	BS109 General Biology I BS110 General Biology I Lab [BS103 General Biology I for students transferring prior to Fall 19]	3 1
BIOL102 General Biology II (serves as Career Studies)	4	BS119 General Biology II BS120 General Biology II Lab [BS104 General Biology II for students transferring prior to Fall 19]	3 1
CHEM101 General Chemistry I (serves as Career Studies) <i>(online course NOT accepted for transfer)</i>	5	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHEM102 General Chemistry II (serves as Career Studies) <i>(online course NOT accepted for transfer)</i>	5	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHEM203 Organic Chemistry I (serves as Career Studies)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHEM204 Organic Chemistry II (serves as Career Studies)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
PHYS111 General Physics I (Non-Calculus) (serves as Science with lab)	4	PY201 Introductory Physics I	4
COMP129 Information Technology	3	CS250 Information Technology <i>(serves as Elective)</i>	3
Humanities Elective Choose One	3-4	<i>(serves as GenEd Humanities Requirement)</i>	3
Social Science Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Humanities or Social Science Elective Choose One	3-4	<i>(serves as GenEd MD Requirement)</i>	3
Brookdale credits toward AS	62-64	Credits Accepted	57

Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHYS112 General Physics II (Non-Calculus)	4	PY202 Introductory Physics II	4
Total Brookdale Credits	66-68	Total Credits Accepted	61

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in all science and mathematics courses (Prefixes: CHEM, MATH, PHYS, BIOL). 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 Brookdale 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.

PE101/102-Physical Education I/II (1 cr) and PH103-Pharmaceutical Sciences Orientation I (1 cr) will be waived for students transferring to USciences after earning the A.S. Science Option, Mathematics/Science. 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:

- 6 credits in Social Sciences
- 3 credits in Humanities

Some or all of these 12 credits of coursework can be taken at Brookdale or after transferring to USciences (currently included in the 3rd and 4th year at USciences). If the 12 credits are taken at Brookdale, they should be selected from the following lists:

<p>6 credits in Social Sciences: Select TWO</p> <p>ANTH105, 115, 116 ECON105, 106, 107 HGEO105 POLI101, 105, 115 PSYC105, 106, 206, 207, 208, 226 SOCI101, 202, 215</p> <p>3 credits in Humanities: Select ONE</p> <p>AMSL101, 102 ARAB101, 102 ARTH105, 106, 107 CHNS101, 102 CINE105 ENGL155, 156, 158, 231, 232, 235, 236, 245, 246, 275 FRCH101, 102, 203, 204, 206, 207 GRMN101, 102, 203, 204 HIST105, 106, 107, 108, 125, 135, 136, 137, 145, 146, 215, 217, 225, 227 HUMN125 ITAL101, 102, 203, 204 JPNS101, 102, 203, 204 MUSI115, 116 PHIL105, 115, 225, 226, 227 PHTY105 PORT101, 102 RUSS101, 102 SPAN101, 102, 203, 204, 207, 215 THTR105, 135</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103, X01, X01 EC101, EC201, ECX01 SSX01 POX01 PS101, X01, 200, X01, 200, 201 SO101, 205, X01</p> <p>GenEd Discipline Requirements – Humanities</p> <p>HUX01, X01 AC101, 102 AR101, 340, 340 CI101, HUX01 HUX01 EN314, X01, 201, X01, 313, X01, X01, 334, 336, X01 FR101, 102, X01, X01, X01 GE101, 102, 201, 202 HIX01, X01, X01, X01, X01, X01, X01, 304, X01, X01, X01, X01, X01, X01 HUX01 HUX01, X01, X01, X01 HUX01, X01, X01, X01 MUX01, X01 PLX01, PL101, RS310, PLX01, ET303 HUX01 HUX01, X01 HUX01, X01 SP101, SP102, SP201, SP202, SP303, HUX01 HUX01, X01</p>
--	---

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		
BS 205*	Human Structure and Function I	3
BS 206*	Human Structure and Function II	3
PH 203	Pharmaceutical Sciences Orientation II	1
	GenEd Social Sciences Requirement	3
CH 346	Biochemistry	4
PH 316	Pharmaceutics and Biopharmaceutics I	3
PH 318	Pharmaceutics Lab	1
ST 310	Intro to Biostatistics	3
CO 101	Intro to Communication	3
CH 356	Molec Biology/Genetics	3
PH 317	Pharmaceutics and Biopharmaceutics II	4
PH 391	Pharmaceutical Sciences Seminar I	1
	Free Electives	3

FOURTH YEAR AT USCIENCES		
PB 452	Legal Aspects of Drug Development	2
PH 450	Manufacturing Pharmacy I	2
PH 451	Manufacturing Pharmacy Lab	1
PH 402	Controlled Release Dosage Forms	2
PH 398	Research Methods in Pharmaceutics	2
PH 491	Pharmaceutical Sciences Seminar II	1
WR 302	Scientific Writing	3
CH 361	Analytical Chemistry	3
CH 363	Analytical Chemistry Lab	1
PH 400	Cosmetic Science	2
PH 401	Cosmetic Science Lab	2
PC 305	Fundamentals of Pharmacology	3
	Free Electives**	4
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3

* We strongly recommend transfer students to take BS205 and BS206 in the summer prior to entering USciences as U3 students.

** Students transferring prior to Fall 18 will be required to take an additional 3 credit elective course.

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	BIOL101 BIOL102
Mathematics	6 credits	MATH153 & MATH171
Communication (written & oral)	9 credits	ENGL121 & ENGL122 CO101
Social Sciences	6 credits	Choose Two USciences Courses: 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 One: Humanities GenEd Elective Choose One USciences Course: 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 (may be substituted by Social Sciences &/or Humanities courses)	6 credits	Choose One: Social Sciences GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education	1 credit	Waived

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		See list of USciences courses approved for Ethics
Information Literacy	BIOL102	
Oral Communication	SOCI101	Or see USciences course approved for Oral Comm
Reasoning & Problem Solving	BIOL101	
Technology	BIOL101	
Written Communication	PSYC105	Or see USciences course approved for Written Comm

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