

Exhibit 20

TRANSFER ADVISING GUIDE

Brookdale Community College (Brookdale) to University of the Sciences in Philadelphia A.S. Environmental Science → B.S. Environmental Science

Brookdale Associate in Science Environmental Science

USciences Bachelor of Science Environmental Science

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
BIOL101 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
BIOL102 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
BIOL208 Ecology and Field Biology	4	BSX01 Biology Elective <i>(serves as Environmental Science Elective)</i>	4
ENVR107 Environmental Science <i>(online course NOT accepted for transfer)</i>	4	BS276 Intro to Environmental Science BS277 Intro to Environmental Science Lab	3 1
ENVR108 Principles of Sustainability	3	MIX01 Misher Elective <i>(serves as Elective)</i>	3
ENVR111 Oceanography	4	MIX01 Misher Elective <i>(serves as Elective)</i>	4
CHEM101 General Chemistry I <i>(online course NOT accepted for transfer)</i>	5	CH101 General Chemistry I or CH111 CH103 General Chemistry Laboratory I	3 1
CHEM102 General Chemistry II <i>(online course NOT accepted for transfer)</i>	5	CH102 General Chemistry II or CH112 CH104 General Chemistry Laboratory II	3 1
MAT153 Pre-calculus Mathematics	4	MA107 Pre-calculus	3
PHYS111 Physics I <i>(serves as Career Studies)</i>	4	PY201 Introductory Physics I	4
PHYS112 Physics II <i>(serves as Career Studies)</i>	4	PY202 Introductory Physics II	4
COMP129 Information Technology <i>(serves as Technology Comp/General Education)</i>	3	CS250 Information Technology <i>(serves as Elective)</i>	3
POLI228 Environmental Politics and Policy	3	POX01 Political Science Elective <i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities Elective Choose One	3	<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	<i>(serves as GenEd MD Requirement)</i>	3
Brookdale credits toward AS	66	Credits Accepted	63
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
BIOL213 Microbiology <i>(Serves as Career Studies)</i>	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
CHEM203 Organic Chemistry I	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHEM204 Organic Chemistry II	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
Total Brookdale Credits	80	Total Credits Accepted	75

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in courses with prefixes: BIOL, MATH and ENGL. 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), BS101-Biological Sciences Orientation (1 cr) and BS204-Biological Sciences Colloquium (1 cr) will be waived for students transferring to USciences after earning the A.S. in Environmental 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 Brookdale for advising.

Note: On-line Lab Science courses are not transferable to USciences

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
- 3 credits in Humanities

Some or all of these 6 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 6 credits are taken at Brookdale, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE ANTH105, 115, 116 ECON105, 106, 107 HGEO105 POLI101, 105, 115 PSYC105, 106, 206, 207, 208, 226 SOCI101, 202, 215</p>	<p>GenEd Discipline Requirements – Social Sciences AN103, X01, X01 EC101, EC201, ECX01 SXX01 POX01 PS101, X01, 200, X01, 200, 201 SO101, 205, X01</p>
<p>3 credits in Humanities: Select ONE 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 – Humanities 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		
MA 110	General Calculus	3
CH 34X	Biochemistry	3-4
GL 275	Environmental Geology	3
CO 101 or CO 204	Communication Requirement	3
BS 466	Genetics	4
BS 280	Comparative Animal Physiology	3
BS 377	Ecology	4
CH 361	Analytical Chemistry	3
CH 363	Analytical Chemistry Lab	1

FOURTH YEAR AT USCIENCES		
BS 493	Biological Sciences Seminar I	1
BS 372	Aquatic Biology	4
BS 375	Environmental Microbiology	3
BS 471	Environmental Law	3
BS 494	Biological Sciences Seminar II	1
BS 440	Environmental Toxicology	3
BS 372	Prin. of Env. Risk Assessment	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
ST 310	Intro to Biostatistics	3
	Environmental Science Electives	1-3

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 or CO204
Social Sciences 6 credits	POLI228 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 One: Humanities 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 6 credits (may be substituted by Social Sciences &/or Humanities courses)	Choose One: Social Science Elective Choose One: Humanities or Social Science Elective
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	BS493 Biological Sciences Seminar I
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.