

## Exhibit 18

### TRANSFER ADVISING GUIDE

#### Delaware County Community College (DCCC) to University of the Sciences in Philadelphia A.S. Engineering → B.S. Biochemistry, Chemistry, Pharmaceutical Chemistry

#### DCCC Associate in Science Engineering

#### USciences Bachelor of Science Biochemistry, Chemistry, Pharmaceutical Chem

DCCC Courses	Cr.	USciences Courses	Cr.
ENG100 English Composition I	3	WR101 Writing & Rhetoric I	3
ENG112 English Composition II: Writing about Lit.	3	WR102 Writing & Rhetoric II	3
COMM111 Public Speaking	3	CO204 Public Speaking	3
DPR101 Introduction to Computer Science	3	CS201 Computer Programming I <i>(serves as Free Elective)</i>	3
MAT160 Calculus I	4	MA122 Calculus I	4
MAT161 Calculus II	4	MA221 Calculus II	4
MAT260 Calculus III	4	MA222 Calculus III	4
MAT261 Differential Equations	3	MA320 Differential Equations <i>(serves as Free Elective)</i>	3
MAT200 Linear Algebra <i>(serves as Engineering Curriculum Elective)</i>	3	MA316 Linear Algebra <i>(serves as Free Elective)</i>	3
CHE110 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE111 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
CHE200 Organic Chemistry I <i>(serves as Engineering Curriculum Elective)</i>	4	CH211 Principle of Organic Chemistry I CH213 Principle of Organic Chemistry Lab I	3 1
CHE201 Organic Chemistry II <i>(serves as Engineering Curriculum Elective)</i>	4	CH212 Principle of Organic Chemistry II CH214 Principle of Organic Chemistry Lab II	3 1
PHY131 Univ Physics I	4	PY211 Physics I	4
PHY132 Univ Physics I	4	PY212 Physics II	4
EGR150 Engineering Topics	1	MIX01 Misher Elective <i>(serves as Free Elective)</i>	1
EGR220 Engineering Thermodynamics <i>(serves as Engineering Curriculum Elective)</i>	3	CHX01 Chemistry Elective <i>(serves as Program Elective)</i>	3
Diversity and Social Justice – Social Sc <b>Choose One:</b> HIS110, 120, 150, 160 POL120 PSY205, 210, 220, 221, 235, 241, 242 SOC110, 120, 180, 210/PSY225, 215	3	<i>(serves as GenEd MD Requirement)</i> HIX01 PO101 PSX01, 200, 347, 301, 204, 200, 201 SO101, 205, 306, AN103, SO330	3
Global Understanding- Social Sciences <b>Choose One:</b> HIS110, 120, 150, 160 PSY210, 235, 241, 242 SOC110, 120, 210/PSY225	3	<i>(serves as GenEd MD Requirement)</i> HIX01 PS200, 204, 200, 201 SO101, SO205, AN103	3

Humanities Elective <b>Choose One:</b> ARB101, 102 ART100, 110 ASL100, 102 DRA110 ENG241, 250 FRE101, 102 GER101 HUM110, 142, 160 PHI100, 110 SPA101, 102	3	(serves as GenEd Humanities Requirement) AC101, 102 HUX01, ARX01 HUX01 HUX01 ENX01 FR101, 102 GE101 HUX01, HU340, RS310 PL101, ETX01 SP101, 102	3
<b>DCCC credits toward AS</b>	<b>67</b>	<b>Credits Accepted</b>	<b>67</b>
<b>Additional Courses Necessary to Enter USciences with Junior (U3) Status:</b>			
BIO110 Intro 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
<b>Total DCCC Credits</b>	<b>71</b>	<b>Total Credits Accepted</b>	<b>71</b>

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 USciences departmental review and approval.

The courses encompassed in the A.S. degree from DCCC 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 USciences departmental review and approval.

PE101/102-Physical Education I/II (1 cr), MA107 – Precalculus (3 cr) and CH120-Orientation for the Chemical Sciences (1 cr) will be waived for students transferring to USciences after earning the A.S. in Engineering. 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 DCCC 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 9 credits of coursework can be taken at DCCC or after transferring to USciences (currently included in the 3<sup>rd</sup> and 4<sup>th</sup> year at USciences). If the 9 credits are taken at DCCC, they should be selected from the following lists:

<p><b>6 credits in Social Sciences: Select TWO</b></p> <p>ECO210, 220 EDU200 POL120, 200 PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242 SOC110, 120, 180, 210, 215, 260</p> <p><b>3 credits in Humanities: Select ONE</b></p> <p>ARB101, 102 ART100, 110 ASL100, 102 DRA110 ENG241, 250 FRE101, 102 GER101 HUM110, 142, 160 PHI100, 110 SPA101, 102</p>	<p><b>GenEd Discipline Requirements – Social Sciences</b></p> <p>EC101, 201 PL302 PO101 PS309, X01, X01, X01, 200, 347, 301, X01, 204, 200, 201 SO101, 205, 306, AN103, SO330, SSX01</p> <p><b>GenEd Discipline Requirements – Humanities</b></p> <p>AC101, 102 HUX01, ARX01 HUX01 HUX01 ENX01 FR101, 102 GE101 HUX01, HU340, RS310 PL101, ETX01 SP101, 102</p>
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Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Chemistry** 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
CH 366	Principles of Analytical Chemistry	3
CH 367	Analyt and Phys Methods Lab I	1
CH 321	Physical Chemistry I	4
CH 300	Discussions in Chemistry	1
	GenEd Social Sciences Requirement	6
CH 322	Physical Chemistry II	4
CH 376	Instrumental Analysis	3
CH 368	Analyt and Phys Methods Lab II	1
CH 404	Literature of Chemistry	1

<b>FOURTH YEAR AT USCIENCES</b>		
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
CH 431	Inorganic Chemistry	3
CH 341	Molecular Structure Biochemistry	3
	GenEd Humanities Requirement	3
CH 402	Seminar in Chemistry II	1
CH 425	Inorganic and Material Synth Lab	2
	Chemistry Elective	3
	Free Elective	3

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Pharmaceutical Chemistry** based on current approved curriculum:  
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<b>THIRD YEAR AT USCIENCES</b>		
CH 331	Basic Inorganic Chemistry	3
	GenEd Social Sciences Requirement	6
CH 300	Discussions in Chemistry	1
CH 321	Physical Chemistry I	4
CH 341	Molecular Structure Biochemistry	3
CH 366	Principles of Analytical Chemistry	3
CH 367	Analyt and Phys Methods Lab I	1
CH 322	Physical Chemistry II	4
CH 343	Intermediary Metabolic Biochemistry	3
CH 376	Instrumental Analysis	3
CH 368	Analyt and Phys Methods Lab II	1
CH 404	Literature of Chemistry	1

<b>FOURTH YEAR AT USCIENCES</b>		
	GenEd Humanities Requirement	3
	Pharmaceutical Chemistry Progr Elect	3
CH 411	Medical Chemistry	3
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
CH 402	Seminar in Chemistry II	1
	Pharmaceutical Chemistry Progr Elect	3
CH 464	Pharmaceutical Analytical Chemistry	3
CH 465	Pharmaceutical Analytical Chem Lab	1
	Free Elective	3

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Biochemistry** 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 133	Introductory Biology II	3
BS 135	Introductory Biology II Lab	1
CH 331	Basic Inorganic Chemistry	3
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 444	Biochemistry Laboratory I	1
CH 300	Discussions in Chemistry	1
CH 404	Literature of Chemistry	1
BS 466	Genetics	4
CH 343	Intermediary Metabolic Chemistry	3
CH 445	Biochemistry Laboratory II	1

FOURTH YEAR AT USCIENCES		
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
	Biochemistry Elective	3
BS 461	Cell Biology	4
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	6
	Free Elective	3
CH 402	Seminar in Chemistry II	1
CH 342	Nucleic Acid Biochemistry	3
	Biochemistry Elective	3
	Free Elective	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) <b>7 credits</b>	CHE110 & CHE111
Mathematics <b>6 credits</b>	MAT160 & MAT161
Communication (written & oral) <b>9 credits</b>	ENG100 & ENG112 & COMM111
Social Sciences <b>6 credits</b>	<b>Choose Two USciences Courses:</b> PO (Political Science), PS (Psychology), SO (Sociology), AN (Anthropology), SS (Social Sciences), EC (Economics), CO (excluding CO 101 and CO 204)

Humanities	<b>6 credits</b>	<b>Choose One:</b> ARB101, 102 ART100, 110 ASL100, 102 DRA110 ENG241, 250 FRE101, 102 GER101 HUM110, 142, 160 PHI100, 110 SPA101, 102  <b>Choose One USciences Course:</b> 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)	<b>6 credits</b>	<b>Choose One:</b> HIS110, 120, 150, 160 POL120 PSY205, 210, 220, 221, 235, 241, 242 SOC110, 120, 180, 210/PSY225, 215  <b>Choose One:</b> ART110 ENG241 PHI100
Physical Education	<b>1 credit</b>	<b>Waived</b>

*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		CH300
Information Literacy	BIO111	CH404
Oral Communication		CH401
Reasoning & Problem Solving	BIO110	
Technology	BIO110	
Written Communication		CH423

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