

## Exhibit 4

### TRANSFER ADVISING GUIDE

**Delaware County Community College (DCCC) to University of the Sciences in Philadelphia  
A.S. Mathematics/Natural Science → B.S. Physics (Biophysics, Medical Physics, Pre-Med Tracks)**

**DCCC Associate in Science  
Mathematics/Natural Science**

**USciences Bachelor of Science  
Physics (Biophysics, Medical Physics, Pre-Med)**

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
COMM100 Interpersonal Communication	3	CO101 Intro to Communication	3
DPR100 Introduction to Information Technology	3	ISX01 Information Science Elective <i>(serves as Free Elective)</i>	3
MAT152 Precalculus <i>(serves as Quantitative Reasoning Math Elective)</i>	4	MA107 Precalculus	3
MAT160 Calculus I <i>(serves as Mathematics Elective)</i>	4	MA122 Calculus I	4
MAT161 Calculus II <i>(serves as Open Elective)</i>	4	MA221 Calculus II	4
CHE110 General Chemistry I <i>(serves as Scientific Inquiry Elective)</i>	4	CH111 Principle of Chemistry I CH113 Principle of Chemistry Laboratory I	3 1
CHE111 General Chemistry II <i>(serves as Laboratory Science Elective)</i>	4	CH112 Principle of Chemistry II CH114 Principle of Chemistry Laboratory II	3 1
CHE200 Organic Chemistry I <i>(serves as Mathematics/Laboratory Science 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 Mathematics/Laboratory Science Elective)</i>	4	CH212 Principle of Organic Chemistry II CH214 Principle of Organic Chemistry Lab II	3 1
BIO110 Intro Biology I <i>(serves as Mathematics/Laboratory Science Elective)</i>	4	BS132 Introductory Biology I BS134 Introductory Biology I Lab  [BS130 Introductory Biology I for students transferring prior to Fall 19]	3 1
BIO111 Intro Biology II <i>(serves as Mathematics/Laboratory Science Elective)</i>	4	BS133 Introductory Biology II BS135 Introductory Biology II Lab  [BS131 Introductory Biology II for students transferring prior to Fall 19]	3 1
PHY131 Univ Physics I <i>(serves as Open Elective)</i>	4	PY211 Physics I	4
PHY132 Univ Physics II <i>(serves as Open Elective)</i>	4	PY212 Physics II	4

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	(serves as GenEd MD Requirement) HIX01 PO101 PSX01, 200, 347, 301, 204, 200, 201 SO101, 205, 306, AN103, SO330	3
Global Understanding - Humanities <b>Choose One:</b> ART110 ENG241 PHI100	3	(serves as GenEd Humanities Requirement) ARX01 ENX01 PL101	3
Social Science Elective <b>Choose One:</b> ECO210, 220 EDU200 POL120, 200 PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242 SOC110, 120, 180, 210/PSY225, 215, 260	3	(serves as GenEd Social Sciences Requirement) EC101, 201 PL302 PO101 PS309, X01, X01, X01, 200, 347, 301, X01, 204, 200, 201 SO101, 205, 306, AN103, SO330, SSX01	3
Social Science Elective <b>Choose One:</b> ECO210, 220 EDU200 POL120, 200 PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242 SOC110, 120, 180, 210/PSY225, 215, 260	3	(serves as GenEd MD Requirement) EC101, 201 PL302 PO101 PS309, X01, X01, X01, 200, 347, 301, X01, 204, 200, 201 SO101, 205, 306, AN103, SO330, SSX01	3
<b>DCCC credits toward AS</b>	<b>68</b>	<b>Credits Accepted</b>	<b>67</b>
<b>Additional Courses Necessary to Enter USciences with Junior (U3) Status:</b>			
MA260 Calculus III (serves as Mathematics/Laboratory Science Elective)	4	MA222 Calculus III	4
<b>Total DCCC Credits</b>	<b>72</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) and PY100 - Physics Orientation (1 cr) will be waived for students transferring to USciences after earning the A.S. in Mathematics/Natural 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 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:

- 3 credits in Social Sciences
- 3 credits in Humanities

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

<p><b>3 credits in Social Sciences: Select ONE</b></p> <p>ECO210, 220  EDU200  POL120, 200  PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242  SOC110, 120, 180, 210/PSY225, 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 Physics (Biophysics track)** 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		
PY 213	Physics III	3
ST 320	Introduction to Probability	3
PY 301	Modern Physics I	3
PY 310	Mechanics	3
PY 370	Math Methods for the Phys Sci I	3
MA 316	Linear Algebra	3
MA 320	Differential Equations	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 371	Math Methods for the Phys Sci II	3
CS 201*	Computer Programming I	3

FOURTH YEAR AT USCIENCES		
PY 495	Undergraduate Research in Physics	2
PY 420	Optics and Wave Phenomena	3
PY 450	Quantum Mechanics	3
CH 341	Molecular Structure Biochemistry	3
PY 431	Statistical Mechanics	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3

\* students transferring Fall 19 and beyond will have to take this additional course

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Physics (Medical Physics track)** 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		
PY 213	Physics III	3
ST 320	Introduction to Probability	3
PY 301	Modern Physics I	3
PY 310	Mechanics	3
PY 380	Electronics	3
MA 320	Differential Equations	3
CH 341	Molecular Structure Biochemistry	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 302	Modern Physics II	3
	Free Elective	3

FOURTH YEAR AT USCIENCES		
PY 495	Undergraduate Research in Physics	2
PY 420	Optics and Wave Phenomena	3
PY 412	Physics of Radiation Therapy	3
PY 411	Advanced Electromagnetism	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
PY 305	Physics Seminar	1

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Physics (Pre-Med track)** 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		
PY 213	Physics III	3
	Statistics Elective	3
PY 301	Modern Physics I	3
PY 310	Mechanics	3
PY 380	Electronics	3
MA 320	Differential Equations	3
CH 341	Molecular Structure Biochemistry	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 302	Modern Physics II	3
BS 466	Genetics	4
	Free Elective	3

FOURTH YEAR AT USCIENCES		
PY 495	Undergraduate Research in Physics	2
PY 380	Electronics	3
PY 420	Optics and Wave Phenomena	3
PY 412	Physics of Radiation Therapy	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
PY 305	Physics Seminar	1

\* students transferring Fall 19 and beyond will have to take this additional 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) <b>7 credits</b>	CHE110 & CHE111
Mathematics <b>6 credits</b>	MAT152 & MAT160
Communication (written & oral) <b>9 credits</b>	ENG100 & ENG112 & COMM100
Social Sciences <b>6 credits</b>	<p><b>Choose One:</b>                      ECO210, 220                      EDU200                      POL120, 200                      PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242                      SOC110, 120, 180, 210/PSY225, 215, 260</p> <p><b>Choose One USciences Course:</b>                      PO (Political Science), PS (Psychology), SO (Sociology), AN (Anthropology), SS (Social Sciences),                      EC (Economics), CO (excluding CO 101 and CO 204)</p>

Humanities	<b>6 credits</b>	<b>Choose One:</b> ART110 ENG241 PHI100  <b>Choose One USciences Courses:</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> ECO210, 220 EDU200 POL120, 200 PSY200, 202, 204, 205, 210, 220, 221, 225, 235, 241, 242 SOC110, 120, 180, 210/PSY225, 215, 260
Physical Education	<b>1 credit</b>	<b>Waived</b>

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

<b>Skills, Values, and Attitudes</b>	<b>Community College Course</b>	<b>USciences Course</b> [RED = courses taken after transferring to USciences]
Ethics		See list of USciences courses approved for Ethics
Information Literacy	BIO111	
Oral Communication		PY305
Reasoning & Problem Solving	BIO110	
Technology	BIO110	
Written Communication		See list of USciences courses approved for Written Com

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