

## Exhibit 10

### TRANSFER ADVISING GUIDE

#### Montgomery County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Physical Sciences → B.S. Physics (*Tracks: General, Material Sciences, Astrophysics*)

**MCCC Associate of Science  
Physical Sciences**

**USciences Bachelor of Science  
Physics (General, Material Sc. , Astrophysics)**

Montgomery CCC 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
Elective (Core Goal 1b) <b>Choose One</b> SPC110 Intro to Speech Communication OR SPC111 Cross-Cult: Intro to Speech	3	CO101 Intro to Communication CO101 Intro to Communication	3
MAT190 Calculus I	4	MA122 Calculus I	4
MAT201 Calculus II	4	MA221 Calculus II	4
MAT202 Calculus III	4	MA222 Calculus III	4
MAT223 Differential Equations	4	MA320 Differential Equations	3
MA220 Linear Algebra ( <i>serves as Free Elective</i> )	3	MA316 Linear Algebra	3
PHY151 Principles of Physics I	4	PY211 Physics I	4
PHY152 Principles of Physics II	4	PY212 Physics II	4
PHY153 Modern Physics ( <i>serves as Free Elective</i> )	3	PY301 Modern Physics I	3
CHE151 Principles of Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Laboratory I	3 1
CHE152 Principles of Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Laboratory II	3 1
Elective (Core Goal 4) CIS111 Comp Science I: Programming & Concepts	3	CS201 Computer Programming I	3
Elective (Core Goal 13) <b>Choose One:</b> ANT104 Introduction to Cultural Anthropology POL202 Constitutional Law: Civil Liberties PSY137 Introduction to Organizational Psychology PSY255 Human Sexuality SOC103 Social Problems SOC105 Social Policy & Ethics in Human Services SPC115 Interpersonal Communication	3	( <i>serves as GenEd MD Requirement</i> ) AN103 Introduction to Anthropology POX01 Political Science Elective PSX01 Psychology Elective PSX01 Psychology Elective SO205 Social Problems SO321 Healthcare Administration CO320 Relational Communication	3
Elective (Core Goal 7) <b>Choose One:</b> ART101 Art History I ART102 Art History II ART103 Art History III ART111 Drawing I	3	( <i>serves as GenEd MD Requirement</i> ) ARX01 Art Elective ARX01 Art Elective ARX01 Art Elective AR201 Drawing	3



POL101 Introduction to Political Science POL124 American National Government PSY137 Introduction to Organizational Psychology		PO101 Intro to Pol Science and American Gov POX01 Political Science Elective PSX01 Psychology Elective	
Elective (Core Goal 10) Exercise & Health Science <b>Choose One</b>	2-3	PE101/102 Physical Education I/II	1
<b>MCCC credits toward AS</b>	<b>64-65</b>	<b>Credits Accepted</b>	<b>62</b>
<b>Total MCCC Credits</b>	<b>64-65</b>	<b>Total Credits Accepted</b>	<b>62</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 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 USciences departmental review and approval.

PY100 - Physics Orientation (1 cr) and MA107-Precalculus (3 cr) will be waived for students transferring to USciences after earning the A.S. in Physical Sciences. 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 Humanities
- 3 credits in Social Sciences

These 6 credits of coursework can be taken at MCCC 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 MCCC, they should be selected from the following lists:

<p><b>3 credits in Humanities: Select ONE</b></p> <p><b>ARA</b> 101, 102</p> <p><b>ART</b> 101, 102, 103, 104, 105, 107, 108 111, 112, 121,122,130, 131, 135, 138, 139, 140, 141, 145, 148, 149, 151, 152, 155, 161, 171, 190, 197, 198, 199, 201, 202, 211, 213, 221, 222, 224, 231, 232, 233, 236, 237, 238, 239, 245, 246, 247, 261, 262, 265, 266, 267, 271, 272, 275, 299</p> <p><b>DAN</b> 101, 102, 103, 104, 110, 121, 122, 123, 131, 132,134, 135, 151, 155, 156, 157, 158, 161, 162, 204, 205, 206, 223, 224, 225, 251</p> <p><b>ENG</b> 165, 199, 201, 202, 211, 212, 221, 222, 228,235, 236, 237, 238, 245, 246, 248, 255, 256, 257, 265, 266, 275, 285, 299</p> <p><b>FRE</b> 101, 102, 190, 199, 201, 202, 251, 252, 261, 299</p> <p><b>GER</b> 101, 102, 111, 199, 201, 202, 251, 252, 299</p> <p><b>HIS</b> 101, 102, 103, 105, 107, 121, 122, 160, 203, 205, 210, 213, 214, 215, 216, 217, 218, 219, 224, 225, 234 235, 240, 241, 250, 260, 299</p> <p><b>IDS</b> 115, 138</p> <p><b>ITA</b> 101, 102, 215, 216, 251, 252, 299</p> <p><b>JPN</b> 101, 102, 199, 201, 202, 299</p> <p><b>MUS</b> 110, 112, 113, 114, 120, 133, 134, 135, 136, 140, 141, 150, 151, 152, 160, 161, 162, 163, 170, 171, 172, 173, 210, 211, 212, 213, 214, 221, 222, 231, 232, 233, 234, 235, 236, 240, 241, 299</p> <p><b>PHI</b> 100, 101, 110, 115, 116, 117, 120, 199, 215, 216, 221, 299</p> <p><b>SPA</b> 101, 102, 111, 112, 127, 199, 201, 202, 215, 216, 230, 251, 252, 299</p> <p><b>THA</b> 105, 106, 114, 150, 151, 201, 203, 205, 206, 250, 251, 290</p> <p><b>TUR</b> 101</p>	<p><b>GenEd Discipline Requirements – Humanities</b></p> <p>AC</p> <p>AR</p> <p> </p> <p> </p> <p> </p> <p>HU</p> <p> </p> <p>EN</p> <p> </p> <p>FR</p> <p>GE</p> <p>HI</p> <p> </p> <p>HU</p> <p>IT, HU</p> <p>HU</p> <p>MU</p> <p> </p> <p>PL</p> <p> </p> <p>SP</p> <p> </p> <p>HU</p> <p> </p> <p>HU</p>
<p><b>3 credits in Social Sciences: Select ONE</b></p> <p><b>ANT</b> 100, 104; <b>CJS</b> 220</p> <p><b>ECO</b> 121, 122, 130, 211, 221; <b>GEO</b> 130</p> <p><b>POL</b> 101, 124, 125, 201, 202, 231, 240, 245, 250, 280</p> <p><b>PSY</b> 101, 136, 137, 138, 200, 206, 208, 210, 214, 215, 216, 217, 218, 219, 231, 240, 245, 255, 299</p> <p><b>SOC</b> 101, 103, 105, 130, 220, 224, 230, 234, 244, 250, 254, 255</p> <p><b>SPC</b> 110, 111, 115</p>	<p><b>GenEd Discipline Requirements – Social Sciences</b></p> <p>AN; SO 304</p> <p>EC; SS</p> <p>PO</p> <p>PS</p> <p> </p> <p>SO</p> <p> </p> <p>CO</p>

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Physics (General 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 310	Mechanics	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 420	Optics and Wave Phenomena	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

FOURTH YEAR AT USCIENCES		
PY 495	Undergraduate Research in Physics	2
	Physics Elective	3
PY 431	Statistical Mechanics	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
PY 496	Advanced Research in Physics	3
	Physics Elective	6
	Physics/Biology/Chem elective	3
PY 305	Physics Seminar	3
	Free Elective	6

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Physics (Material Science 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 310	Mechanics	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 420	Optics and Wave Phenomena	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

<b>FOURTH YEAR AT USCIENCES</b>		
PY 480	Introduction to Material Science	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
PY 470	Solid State Physics	3
PY 496	Advanced Research in Physics	3
PY 440	Intro to Nano Science	3
	Physics/Biology/Chem elective	3
	Free Elective	6
PY 305	Physics Seminar	3

Suggested checklist for 3<sup>rd</sup> and 4<sup>th</sup> year at USciences for **BS in Physics (Astrophysics 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)*

<b>THIRD YEAR AT USCIENCES</b>		
PY 213	Physics III	3
ST 320	Introduction to Probability	3
PY 310	Mechanics	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
MA 430	Differential Geometry	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

<b>FOURTH YEAR AT USCIENCES</b>		
PY 463	Physics of Stars and Black Holes	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3
PY 465	Intro to Cosmology	3
PY 496	Advanced Research in Physics	3
	Physics Elective	3
PY 420	Optics and Wave Phenomena	3
	Free Elective	6
PY 305	Physics Seminar	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>	CHE151 & CHE152
Mathematics <b>6 credits</b>	MAT190 & MAT201
Communication (written & oral) <b>9 credits</b>	ENG101 & ENG102 & (SPC110 or SPC111)
Social Sciences <b>6 credits</b>	<b>Choose One Elective (Core Goals 11 &amp; 12):</b> ANT104, GEO130, POL101, POL124, PSY137  <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)
Humanities <b>6 credits</b>	<b>Choose One Elective (Core Goals 6 &amp; 9):</b> HIS101, HIS102, HIS203, HIS205, HIS213, HIS219, HIS234, HIS235, HIS250, HIS260  <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 <b>6 credits</b> (may be substituted by Social Sciences &/or Humanities courses)	<b>Choose One Elective (Core Goal 7):</b> ART101, ART102, ART103, ART111, ART121, ART161, ART171, DAN102, DAN104, DAN110, DAN121, DAN123, DAN151, ENG201, ENG202, ENG212, ENG221, ENG222, ENG235, ENG236, ENG237, ENG238, ENG245, ENG246, ENG248, ENG255, ENG256, ENG257, ENG265, ENG266, ENG275, HIS101, HIS121, MUS110, MUS140, MUS221, THA105, THA114  <b>Choose One Elective (Core Goal 13):</b> ANT104, POL202, PSY137, PSY255, SOC103, SOC105, SPC115
Physical Education <b>1 credit</b>	<b>Choose One Elective (Core Goal 10)</b> Exercise & Health Science

*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		See list of USciences courses approved for Inf Literacy
Oral Communication		PY305
Reasoning & Problem Solving	PHY121	
Technology	PHY121	
Written Communication	HIS101	OR USciences course

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