

Exhibit 9

TRANSFER ADVISING GUIDE

Montgomery County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Physical Sciences → B.S. Physics (Biophysics, Medical Physics, Pre-Med)

MCCC Associate of Science Physical Sciences

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

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) Choose One 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
PHY151 Principles of Physics I (serves as Free Elective)	4	PY211 Physics I	4
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
CHE261 Organic Chemistry I	4	CH211 Principles of Organic Chemistry I CH213 Principles of Organic Chemistry Lab I	3 1
CHE262 Organic Chemistry II	4	CH212 Principles of Organic Chemistry II CH214 Principles of Organic Chemistry Lab II	3 1
Elective (Core Goal 4) CIS111 Comp Science I: Programming/Concep	3	CS201 Computer Programming I	3
Elective (Core Goal 13) Choose One: 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) Choose One: ART101 Art History I ART102 Art History II ART103 Art History III ART111 Drawing I ART121 Painting I	3	<i>(serves as GenEd MD Requirement)</i> ARX01 Art Elective ARX01 Art Elective ARX01 Art Elective AR201 Drawing ARX01 Art Elective	3

POL124 American National Government PSY137 Introduction to Organizational Psychology		POX01 Political Science Elective PSX01 Psychology Elective	
Elective (Core Goal 10) Exercise & Health Science Choose One	2-3	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62-63	Credits Accepted	60
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY152 Principles of Physics II	4	PY212 Physics II	4
BIO151 Principles of 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
BIO152 Principle of 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
Total MCCC Credits	74-75	Total Credits Accepted	72

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 3rd and 4th year at USciences). If the 6 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Humanities: Select ONE</p> <p>ARA 101, 102</p> <p>ART 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>DAN 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>ENG 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>FRE 101, 102, 190, 199, 201, 202, 251, 252, 261, 299</p> <p>GER 101, 102, 111, 199, 201, 202, 251, 252, 299</p> <p>HIS 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>IDS 115, 138</p> <p>ITA 101, 102, 215, 216, 251, 252, 299</p> <p>JPN 101, 102, 199, 201, 202, 299</p> <p>MUS 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>PHI 100, 101, 110, 115, 116, 117, 120, 199, 215, 216, 221, 299</p> <p>SPA 101, 102, 111, 112, 127, 199, 201, 202, 215, 216, 230, 251, 252, 299</p> <p>THA 105, 106, 114, 150, 151, 201, 203, 205, 206, 250, 251, 290</p> <p>TUR 101</p>	<p>GenEd Discipline Requirements – Humanities</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>3 credits in Social Sciences: Select ONE</p> <p>ANT 100, 104; CJS 220</p> <p>ECO 121, 122, 130, 211, 221; GEO 130</p> <p>POL 101, 124, 125, 201, 202, 231, 240, 245, 250, 280</p> <p>PSY 101, 136, 137, 138, 200, 206, 208, 210, 214, 215, 216, 217, 218, 219, 231, 240, 245, 255, 299</p> <p>SOC 101, 103, 105, 130, 220, 224, 230, 234, 244, 250, 254, 255</p> <p>SPC 110, 111, 115</p>	<p>GenEd Discipline Requirements – Social Sciences</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 3rd and 4th 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
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

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
PY 305	Physics Seminar	1
	GenEd Humanities Requirement	3
	GenEd Social Sciences Requirement	3

Suggested checklist for 3rd and 4th year at USciences for **BS in Physics (Medical Physics track)** based on current approved curriculum:

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THIRD YEAR AT USCIENCES		
PY 213	Physics III	3
ST 320	Introduction to Probability	3
PY 310	Mechanics	3
PY 380	Electronics	3
PY 301	Modern Physics I	3
CH 341	Molecular Structure Biochemistry	3
PY 406	Advanced Lab	1
PY 410	Electricity and Magnetism	3
PY 420	Optics and Wave Phenomena	3
PY 302	Modern Physics II	3

FOURTH YEAR AT USCIENCES		
PY 495	Undergraduate Research in Physics	2
PY 412	Physics of Radiation Therapy	3
PY 411	Advanced Electromagnetism	3
	GenEd Humanities Requirement	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
	Physics/Biology/Biochem Elective	3
PY 305	Physics Seminar	1
	GenEd Social Sciences Requirement	3

Suggested checklist for 3rd and 4th 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 310	Mechanics	3
PY 380	Electronics	3
PY 301	Modern Physics I	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

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
	GenEd Humanities Requirement	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
PY 305	Physics Seminar	1
	GenEd Social Sciences Requirement	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	CHE151 & CHE152
Mathematics 6 credits	MAT190 & MAT201
Communication (written & oral) 9 credits	ENG101 & ENG102 & (SPC110 or SPC111)
Social Sciences 6 credits	Choose One Elective (Core Goals 11 & 12): ANT104, GEO130, POL101, POL124, PSY137 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 Elective (Core Goals 6 & 9): HIS101, HIS102, HIS203, HIS205, HIS213, HIS219, HIS234, HIS235, HIS250, HIS260 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 Elective (Core Goal 7): 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 Choose One Elective (Core Goal 13): ANT104, POL202, PSY137, PSY255, SOC103, SOC105, SPC115
Physical Education 1 credit	Choose One Elective (Core Goal 10) 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	BIO152	
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.