

PROGRAM-TO-PROGRAM – GUARANTEED TRANSFER AGREEMENT
between
MERCER COUNTY COMMUNITY COLLEGE
and
UNIVERSITY OF THE SCIENCES IN PHILADELPHIA

Preface

Mercer County Community College (MCCC) and University of the Sciences in Philadelphia (USciences) enter into this agreement in order to facilitate the transfer of MCCC students who have completed the MCCC associate degree programs identified in Exhibit 1 into the corresponding bachelor degree programs at USciences.

Subject to the terms of this agreement, as provided in Exhibit 1, a student who completes the appropriate A.S. degree at MCCC will be assured junior status in the corresponding B.S. degree program at USciences. The length of time required for a full-time student to complete the requirements for the B.S. degree varies by degree program, as provided in Exhibit 1. In general, a full-time student can complete most B.S. degree programs within four regular semesters, providing the student appropriately schedules and successfully completes (without repeating courses) his or her remaining courses at USciences.

Terms and Conditions for Admission to University of the Sciences in Philadelphia

1. Students who complete the A.S. degree at MCCC as specified in Exhibit 1 and the attached program-to-program (2+2) articulation documents and are admitted to USciences will enter with junior status and are assured transfer credit as indicated. Courses not included in this document will be evaluated by USciences on a course-by-course basis.
2. The minimum cumulative GPA required for admission to each degree program covered under the terms of this agreement is provided in Exhibit 1.
3. A minimum grade of “C” is required to transfer a course to USciences, except as noted in Exhibit 1. Students who do not meet the minimum grade requirement(s) stated in Exhibit 1 can still transfer under the terms of this articulation agreement, subject to USciences departmental review and approval.
4. The courses encompassed in the A.S. degree at MCCC must be completed within the 3 years immediately 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.
5. USciences will accept a maximum of 90 credits in transfer from MCCC.
6. MCCC credits earned through Prior Learning Assessment will be evaluated on an individual basis.

7. The student must meet all applicable USciences requirements and deadlines pertaining to application for admission and payment of tuition and fees.
8. Students are strongly encouraged to complete the “USciences Letter of Intent” form at least one year prior to transferring to USciences.
9. Only students who have graduated from MCCC with the associate degree specified in Exhibit 1 by the time of their matriculation to USciences will be covered by the terms of this agreement. For MCCC students who do not graduate with the associate degree specified in Exhibit 1, USciences will determine appropriate transfer of credit on a course-by-course basis.
10. Students transferring under this agreement will be eligible for financial aid and housing on the same basis as other USciences students. Transfer scholarships and Phi Theta Kappa scholarships are available to assist qualified transfer students.
11. Once at USciences, students who transfer under the terms of this agreement are responsible for meeting all degree requirements in effect for their major based on the Catalog Year backdated to the academic year when they would have started studies at USciences if they had entered as a full-time, first-year student. These students will abide by the policies and procedures, and any revisions thereof, which apply to all USciences students.
12. USciences will waive the application fee for students who apply to USciences pursuant to this agreement.
13. At least 30 credits must be completed in-residence at a USciences campus. At least half of these credits must be upper division courses required by the major (i.e. 300 level or above).

Joint Responsibilities for Maintenance of this Agreement

1. MCCC and USciences agree to maintain and distribute information about this agreement, and any changes relevant to it, to students, faculty, counselors, and advisors.
2. MCCC and USciences will assure that the appropriate personnel at their respective institutions are made aware of the agreement, and any revisions thereto, and are encouraged to support it.
3. MCCC and USciences agree to independently develop and implement their own advertising and promotional efforts to communicate the benefits of this program-to-program agreement. Each institution will share marketing materials and seek input prior to launching.
4. Both institutions will encourage MCCC students to meet with representatives of USciences to discuss issues related to admission, financial aid, and transfer of courses well in advance of their expected date of entry.
5. Faculty from each institution teaching in the curriculum for which this agreement has been developed will be encouraged to meet annually to discuss issues of curriculum and student development.

6. MCCC and USciences will designate a representative or representatives at each institution who will coordinate the Program-to-Program agreement between the two institutions.
7. MCCC and USciences agree to exchange relevant data and documents annually that will contribute to the maintenance and improvement of this articulation agreement, enhance the transfer process, and promote effective cooperation between institutions.

Obligations of University of the Sciences:

1. To attend Transfer Fairs and/or major transfer events at any MCCC campuses.
2. To invite MCCC students who have completed a “USciences Letter of Intent” form to Preview Days/Campus Visit events for information/advising with USciences faculty and staff in order to facilitate smooth curricular and co-curricular integration to USciences.
3. To have recruiters and advisors visit MCCC and meet with prospective and current students in the program-to-program agreement as determined.
4. To send to students who complete the “USciences Letter of Intent” form an electronic information packet that includes a letter explaining the USciences application process.

Obligations of MCCC:

1. To identify the students who will be participating in this program-to-program agreement and assist them in completing all required paperwork while enrolled at MCCC; to provide the students with information (“USciences Letter of Intent” form and Transfer Advising Guide) on the USciences admissions requirements for their specific program of study.
2. To email the intent forms to the Associate Director of Transfer/Professional Admission at USciences.
3. To be available to meet with the students to track their progress towards completing the associate’s degree and to review and revise their original Intent form in the event they change their major or anticipated entry term at USciences.
4. To explain all requirements to students, including the need to send an official transcript verifying receipt of the associate degree upon completion of their last semester.
5. To publicize and promote this Agreement to prospective and current MCCC students in its promotional literature, and make arrangements for USciences recruiters and advisors to visit MCCC and meet with prospective and current students in the program-to-program agreement.

Revision, Renewal and Termination of this Agreement

1. The USciences Associate Director for Transfer Admission and the MCCC Director of Transfer Services, are responsible for identifying and communicating to each other changes in the policies or requirements of their respective institutions that affect this agreement.

2. This agreement will be in effect as of the date of its signing. It will be reviewed by the parties every 3 years and in response to curricular changes, and will be renewed automatically until superseded by a new agreement or formally terminated in writing. The party making any curricular changes and any other relevant institutional changes that may materially affect the nature of the agreement will communicate in a timely manner with the other party.
3. Either party may initiate amendments to this agreement, including the exhibits, by submitting them in writing to the USciences Associate Director for Transfer Admission or the MCCC Director of Transfer Services. No amendments will be effective unless signed by the authorized agents of each party. Whenever possible, USciences will grandfather students who have followed the previous articulation document.
4. Either institution may terminate this agreement at any time by written notice of at least one (1) year in advance of the effective date of termination. Should this agreement be terminated, it is understood that the termination will not apply to students already accepted to USciences under the terms of this agreement, but not yet enrolled in classes. The addresses to which all written notices are to be sent are specified below:

Mercer County Community College:
Office of Academic Affairs
1200 Old Trenton Road
West Windsor, NJ 08550

University of the Sciences in Philadelphia:
Provost
University of the Sciences
600 South 43rd Street
Philadelphia, PA 19104-4495

General Considerations

1. Each party shall defend, indemnify and hold harmless, the other party, its trustees, directors, officers, employees, staff, agents and independent contractors from and against any and all claims, liability, losses, damages, demands, lawsuits, settlements, judgments and expenses (including reasonable attorneys' fees) arising directly or indirectly from any acts or omissions of a party, its employees, agents and/or assigns, including, but not limited to, negligence, personal injury, breach of contract, misrepresentation and fraud.
2. The willingness of both institutions to enter this agreement in order to facilitate the transfer of students from MCCC to USciences and to expand their opportunities for academic success at USciences is indicated by the following signatures.

The undersigned representatives of the parties, MCCC and University of the Sciences in Philadelphia, have executed this agreement on the dates indicated.

**For Mercer County Community
College:**


**For University of the Sciences in
Philadelphia:**

 8.28.17

Dr. Jianping Wang Date
President

 9/25/17

Dr. Paul Katz Date
President

 8-28-17

Dr. David Edwards Date
Vice President of
Academic Affairs

 9/19/17

Dr. Peter Miller Date
Provost and Vice President of
Academic Affairs

Exhibit 1

Only the MCCC and corresponding USciences degree programs identified below are governed by the terms of this agreement.

MCCC students interested in matriculating into a USciences B.S. degree program under the terms of this agreement are strongly urged to contact the applicable USciences academic program director early in their enrollment at MCCC for academic advisement.

1. A.S. in Biology into the B.S. in Biology or
A.S. in Biology into the B.S. in Microbiology or
A.S. in Biology into the B.S. in Biomedical Sciences
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in courses with prefixes: BIO, MAT, ENG101, ENG102. The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 2***.
2. A.S. in Biology into the B.S. in Environmental Science degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all courses with prefixes: BIO, MAT, ENG101, ENG102. The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 3***.
3. A.S. in Biology into the B.S. in Neuroscience degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in MAT151, PHY101&102, BIO101&102, and PSY101. The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 4***.
4. A.S. in Biology into the B.S. in Biochemistry degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 5***.

5. A.S. in Biology into the B.S. in Medical Humanities degree
 - a. A minimum 2.5 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in ENG101 and ENG102. The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in **Exhibit 6**.
6. A.S. in Biology into the B.S. in Pharmaceutical Sciences degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in **Exhibit 7**.
7. A.S. in Biology into the B.S. in Pharmacology and Toxicology degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in **Exhibit 8**.
8. A.S. in Chemistry into the B.S. in Chemistry degree or
A.S. in Chemistry into the B.S. in Biochemistry degree or
A.S. in Chemistry into the B.S. in Pharmaceutical Chemistry degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in **Exhibit 9**.

9. A.S. in Chemistry into the B.S. in Physics (Biophysics, Medical Physics and Pre-Med tracks) degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 10***.
10. A.S. in Physics into the B.S. in Physics (Physics General, Material Science, Astrophysics tracks) degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 11***.
11. A.S. in Engineering Science into the B.S. in Physics (Physics General, Material Science, Astrophysics tracks) degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 12***.
12. A.S. in Mathematics into the B.S. in Physics (Physics General, Material Science, Astrophysics tracks) degree
 - a. A minimum 2.7 cumulative GPA is required for admission.
 - b. Additional Information: A minimum grade of “B” in all science and mathematics courses (Prefixes: BIO, CHE, PHY, MAT). The courses encompassed in the A.S. degree from MCCC must be completed within the 3 years preceding matriculation at USciences. Students who do not meet these additional requirements can still transfer under this articulation agreement, subject to USciences departmental review and approval.
 - c. The Transfer Advising Guide is provided in ***Exhibit 13***.
13. A.S. in Business Administration into the B.S. in Pharmaceutical and Healthcare Business degree
 - a. A minimum 2.5 cumulative GPA is required for admission.
 - b. The Transfer Advising Guide is provided in ***Exhibit 14***.

Exhibit 2

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia
A.S. Biology → B.S. Biology or BS Biomedical Sciences or BS Microbiology

**MCCC Associate in Science
Biology**

**USciences Bachelor of Science
Biology or Biomedical Sciences or Microbiology**

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
BIO101 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
BIO102 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
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
Biology Elective Choose One: BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Biology Elective) BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4

Social Science GenEd Elective Choose One	3	<i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY101 College Physics I	4	PY201 Introductory Physics I	4
PHY102 College Physics II	4	PY202 Introductory Physics II	4
Total MCCC Credits	70	Total Credits Accepted	65

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in courses with prefixes: BIO, MAT and ENG101, ENG102. 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.

BS101-Biological Sciences Orientation (1 cr), BS204-Biological Sciences Colloquium (1 cr) and MI110-Intro to Health and Medical Professions (1 cr) will be waived for students transferring to USciences after earning the A.S. in Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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Suggested checklist for 3rd and 4th year at USciences for **BS in Biology** 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		
	GenEd Social Sciences Requirement	3
CH 34X	Biochemistry	3-4
	Quantitative Science Requirement	3-4
	Biology Elective	3-4
	GenEd Humanities Requirement	6
BS 466	Genetics	4
	Natural Science Elective	3-5
	Biology Elective	3-4
	Free Elective	6

FOURTH YEAR AT USCIENCES		
BS 493	Biological Sciences Seminar I	1
	Free Elective	3-6
	Biology Elective	3-6
BS 494	Biological Sciences Seminar II	1
	Free Elective(s)	3-9
	Biology Elective(s)	3-9

Suggested checklist for 3rd and 4th year at USciences for **BS in Biomedical Sciences** 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 34X	Biochemistry	3-4
BS 205 or BS 310	Anatomy and Physiology I	3
BS 207	Anatomy and Physiology I Lab – Optional	1
	Clinical Biology elective	3-4
	GenEd Humanities Requirement	6
	GenEd Social Sciences Requirement	3
BS 206 or BS 311	Anatomy and Physiology II	3
BS 208	Anatomy and Physiology II Lab – Optional	1
	Free Elective	6
BS 466	Genetics	4
ST 310	Biostatistics or Free Elective	3

FOURTH YEAR AT USCIENCES		
BS 493	Biological Sciences Seminar I	1
	Free Electives	10
BS 494	Biological Sciences Seminar II	1
	Free Electives	10
	Science Electives	5

Suggested checklist for 3rd and 4th year at USciences for **BS in Microbiology – Applied Microbiology & Biotechnology 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		
CH 34X	Biochemistry	3-4
BS 343	Microbial Genetics	4
BS 34X	Trends in Microbiology	3
	Applied Microbiology Elective	9-12
	GenEd Humanities Requirement	6
	GenEd Social Sciences Requirement	3
	Quantitative Science	3-4

FOURTH YEAR AT USCIENCES		
BS 493	Biological Sciences Seminar I	1
BS 453	Microbial Physiology	4
BS 464	Biotechnology Lecture	3
BS 461	Cell Biology	4
BS 476	Molecular Biology Lab	2
BS 494	Biology Seminar II	1
	Free Electives	5
	Applied Micro Electives	6-8

Suggested checklist for 3rd and 4th year at USciences for **BS in Microbiology – Medical Microbiology & Immunology 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		
CH 34X	Biochemistry	3-4
BS 343	Microbial Genetics	4
BS 34X	Trends in Microbiology	3
BS 348	Clinical Microbiology	4
	Med Micro Electives	9-12
	GenEd Humanities Requirement	6
	GenEd Social Sciences Requirement	3
	Quantitative Science	3-4

FOURTH YEAR AT USCIENCES		
BS 493	Biological Sciences Seminar I	1
BS 453	Microbial Physiology	4
	Med Micro Elective	3-4
	Microbiology Program Elective	3-4
BS 355	Clinical Immunology	3
BS 494	Biological Sciences Seminar II	1
BS 308	Parasitology	3
BS 450	Virology	3
	Free Elective	2

* for students transferring prior to Fall 18 the checklist for BS in Microbiology differ from the one reported above; please contact USciences Transfer Advising office for the specific curriculum.

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	BS493 Biological Sciences Seminar I
Oral Communication	SOC101	or USciences course approved for Oral Com
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	or USciences course 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.

Exhibit 3

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Environmental Science

MCCC Associate in Science Biology

USciences Bachelor of Science Environmental Science

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
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BIO102 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
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
BIO204 Ecology (serves as Biology Elective)	4	BS377 Ecology	4
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd MD Requirement)	3

GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY101 College Physics I	4	PY201 Introductory Physics I	4
PHY102 College Physics II	4	PY202 Introductory Physics II	4
Total MCCC Credits	70	Total Credits Accepted	65

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in courses with prefixes: BIO, MAT and ENG100, ENG112. 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.

BS101-Biological Sciences Orientation (1 cr), BS204-Biological Sciences Colloquium (1 cr) will be waived for students transferring to USciences after earning the A.S. in Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO</p> <p>Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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		
BS 276	Intro to Environmental Science	3
BS 277	Intro to Environmental Science Lab	1
CH 34X	Biochemistry	3-4
GL 275	Environmental Geology	3
	GenEd Social Sciences Requirement	3
BS 466	Genetics	4
BS 280	Comparative Animal Physiology	3
CH 361	Analytical Chemistry	3
CH 363	Analytical Chemistry Lab	1
ST 310	Intro to Biostatistics	3
	Biology Elective	3

FOURTH YEAR AT USCIENCES		
	Environmental Science Elective	3-4
BS 493	Biological Sciences Seminar I	1
BS 372	Aquatic Biology	4
BS 375	Environmental Microbiology	3
BS 471	Environmental Law	3
	GenEd Humanities Requirement	6
BS 494	Biological Sciences Seminar II	1
BS 440	Environmental Toxicology	3
BS 372	Prin. of Env. Risk Assessment	3
	Env. Science Electives	6

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	BS493 Biological Sciences Seminar I
Oral Communication	SOC101	or USciences course approved for Oral Com
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	or USciences course 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.

Exhibit 4

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Neuroscience

MCCC Associate in Science Biology

USciences Bachelor of Science Neuroscience

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
BIO101 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
BIO102 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
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19] (serves as Elective)	3 1
Biology Elective Choose One: BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Elective) BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4

PSY101 Intro to Psychology (serves as Social Science GenEd Elective)	3	PS101 Intro to Psychology (serves as GenEd Social Sciences Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY101 College Physics I	4	PY201 Introductory Physics I	4
PHY102 College Physics II	4	PY202 Introductory Physics II	4
Total MCCC Credits	70	Total Credits Accepted	65

A minimum 2.7 cumulative GPA is required for admission.

A minimum grade of “B” in courses with prefixes: MAT151, PHY101&102, BIO101&102, and PSY101. 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.

NS101-Neuroscience Orientation (1 cr) and NS263-Neuroscience Colloquium (1 cr) will be waived for students transferring to USciences after earning the A.S. in Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO</p> <p>MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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Suggested checklist for 3rd and 4th year at USciences for **BS in Neuroscience** 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		
NS 260	Introduction to Neuroscience I	3
NS 261	Introduction to Neuroscience II	3
	Neuroscience CORE courses	6
	Neuroscience TRACK electives	12-16
CH 34X	Biochemistry	3-4
	Directed Research or Independent Study	2
	GenEd Social Sciences Requirement	3

FOURTH YEAR AT USCIENCES		
	Neuroscience CORE course	3
	Neuroscience TRACK electives	6-8
NS 495	Seminar in Neuroscience I	1
	Neuroscience Capstone	1
	GenEd Humanities Requirement	6
	Free Elective(s)	6-8

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	PSY101 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	
Oral Communication	SOC101	or USciences course approved for Oral Com
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	

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

Exhibit 5

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Biochemistry

MCCC Associate in Science Biology

USciences Bachelor of Science Biochemistry

MCCC 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
CMN112 Public Speaking	3	CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA122 Calculus I	4
CHE101 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH211 Principles of Organic Chemistry I CH213 Principles of Organic Chemistry Lab I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH212 Principles of Organic Chemistry II CH214 Principles of Organic Chemistry Lab II	3 1
BIO101 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
BIO102 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
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19] (serves as Biochemistry Program Elective)	3 1
Biology Elective Choose One: BIO201 Microbiology BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Free Elective) BS243&244 Microbial Science + Lab BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4

Social Science GenEd Elective Choose One	3	<i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One : HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	58
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY115 University Physics I	4	PY211 Introductory Physics I	4
PHY215 University Physics II	4	PY212 Introductory Physics II	4
MAT152 Calculus II	4	MA221 Calculus II	4
Total MCCC Credits	74	Total Credits Accepted	70

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 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 departmental review and approval.

CH120-Orientation for the Chemical Sciences (1 cr) will be waived for students transferring to USciences after earning the A.S. in Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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		
CH 331	Basic Inorganic Chemistry	3
ST310 or MA222	Intro to Biostatistics or Calculus III	3/4
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 300	Discussions in Chemistry	1
CH 404	Literature of Chemistry	1
CH 343	Intermediary Metabolic Chemistry	3
CH 444	Biochemistry Laboratory I	1
CH 445	Biochemistry Laboratory II	1

FOURTH YEAR AT USCIENCES		
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
BS 461 or BS 306	Cell Biology	4
	Human Molecular and Cellular Biology	3
	GenEd Social Sciences Requirement	3
CH 402	Seminar in Chemistry II	1
CH 342	Nucleic Acid Biochemistry	3
BS 466	Genetics	4
	GenEd Humanities Requirement	6
	Biochemistry Program Elective	2

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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		CH 300
Information Literacy	BIO102	CH 404
Oral Communication		CH 401
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication		CH 423

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

Exhibit 6

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Medical Humanities

MCCC Associate in Science Biology

USciences Bachelor of Science Medical Humanities

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
BIO101 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
BIO102 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
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
Biology Elective Choose One: BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Science Elective) BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4

Social Science GenEd Elective Choose One	3	<i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Total MCCC Credits	62	Total Credits Accepted	57

A minimum 2.5 cumulative GPA is required for admission.

A minimum grade of “B” in ENG101 and ENG102. 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 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 departmental review and approval.

Transfer students are required to participate in HU101-Orientation to Humanities (1 cr, Pass/Fail) which is a relaxed introduction to the various Humanities subjects, with modest weekly reading assignments, and class discussion; no writing requirements.

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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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 and FOURTH YEAR AT USCIENCES		
HU101	Orientation to Humanities	1
	*Major Distribution Choose 5: Fine Arts English History Philosophy Classic Religious Study Foreign Language (two semesters)	15
	Humanities Elective	30
	GenEd Humanities Requirement	6
HU494	&Pre-Capstone	3
HU495	&Capstone	3
	Free Elective	3
	GenEd Social Science Requirement	3

* students transferring prior to Fall 19 will have to complete Foreign Language, English, History, Philosophy and Ethics

& students transferring prior to Fall 19 will have to complete Senior Seminar instead of HU494-495

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	
Oral Communication	SOC101	OR USciences course approved for Oral Com
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	OR USciences course 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.

Exhibit 7

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Pharmaceutical Sciences

MCCC Associate in Science Biology

USciences Bachelor of Science Pharmaceutical Sciences

MCCC 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
CMN111 Speech: Human Communication	3	CO101 Intro to Communication	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
BIO101 General Biology I	4	BS109 General Biology I BS110 General Biology I Lab [BS103 General Biology I for students transferring prior to Fall 19]	3 1
BIO102 General Biology II	4	BS119 General Biology II BS120 General Biology II Lab [BS104 General Biology II for students transferring prior to Fall 19]	3 1
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
Biology Elective Choose One: BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Biology Elective) BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3

Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY101 College Physics I	4	PY201 Introductory Physics I	4
PHY102 College Physics II	4	PY202 Introductory Physics II	4
Total MCCC Credits	70	Total Credits Accepted	65

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 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 departmental review and approval.

PH103-Pharmaceutical Sciences Orientation I (1 cr) will be waived for students transferring to USciences after earning the A.S. Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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		
BS 205*	Human Structure and Function I	3
BS 206*	Human Structure and Function II	3
PH 203	Pharmaceutical Sciences Orientation II	1
	GenEd Social Sciences Requirement	3
CH 346	Biochemistry	4
PH 316	Pharmaceutics and Biopharmaceutics I	3
PH 318	Pharmaceutics Lab	1
ST310	Intro to Biostatistics	3
	GenEd Humanities Requirement	3
CH 356	Molec Biology/Genetics	3
PH 317	Pharmaceutics and Biopharmaceutics II	4
PH 391	Pharmaceutical Sciences Seminar I	1

FOURTH YEAR AT USCIENCES		
PB 452	Legal Aspects of Drug Development	2
PH 450	Manufacturing Pharmacy I	2
PH 451	Manufacturing Pharmacy Lab	1
PH 402	Controlled Release Dosage Forms	2
PH 398	Research Methods in Pharmaceutics	2
PH 491	Pharmaceutical Sciences Seminar II	1
WR 302	Scientific Writing	3
CH 361	Analytical Chemistry	3
CH 363	Analytical Chemistry Lab	1
PH 400	Cosmetic Science	2
PH 401	Cosmetic Science Lab	2
PC 305	Fundamentals of Pharmacology	3
	Free Electives**	5
	GenEd Humanities Requirement	3

* We strongly recommend transfer students to take BS205 and BS206 in the summer prior to entering USciences as U3 students.

** Students transferring prior to Fall 18 will be required to take an additional 3 credit elective 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) 7 credits	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	
Oral Communication	SOC101	OR USciences course approved for Oral Communication
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	OR 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.

Exhibit 8

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Biology → B.S. Pharmacology and Toxicology

MCCC Associate in Science Biology

USciences Bachelor of Science Pharmacology and Toxicology

MCCC 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
CMN111 Speech: Human Communication	3	CO101 Intro to Communication	3
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Technical Elective)	4	MA110 General Calculus	3
CHE101 General Chemistry I	4	CH101 General Chemistry I CH103 General Chemistry Laboratory I	3 1
CHE102 General Chemistry II	4	CH102 General Chemistry II CH104 General Chemistry Laboratory II	3 1
CHE201 Organic Chemistry I (serves as Technical Elective)	5	CH201 Organic Chemistry I CH203 Organic Chemistry Laboratory I	3 1
CHE202 Organic Chemistry II (serves as Technical Elective)	5	CH202 Organic Chemistry II CH204 Organic Chemistry Laboratory II	3 1
BIO101 General Biology I	4	BS109 General Biology I BS110 General Biology I Lab [BS103 General Biology I for students transferring prior to Fall 19]	3 1
BIO102 General Biology II	4	BS119 General Biology II BS120 General Biology II Lab [BS104 General Biology II for students transferring prior to Fall 19]	3 1
BIO201 Microbiology (serves as Biology Elective)	4	BS243 Microbial Science BS244 Microbial Science Lab [BS240 Basics of Microbiology for students transferring prior to Fall 19]	3 1
Biology Elective Choose One: BIO202 Woody Plants BIO203 Entomology BIO204 Ecology BIO208 Genetics	4	(serves as Biology Elective) BSX01 Biology Elective BSX01 Biology Elective BS377 Ecology BSX01 Biology Elective	4
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3

Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	62	Credits Accepted	57
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
PHY101 College Physics I	4	PY201 Introductory Physics I	4
PHY102 College Physics II	4	PY202 Introductory Physics II	4
Total MCCC Credits	70	Total Credits Accepted	65

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 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 departmental review and approval.

PC181-Pharm/Tox Orientation I (1 cr) will be waived for students transferring to USciences after earning the A.S. Biology. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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		
BS 205*	Human Structure and Function I	3
BS 207*	Human Structure and Function Lab I OR PC303 Virtual Physiology Lab I	1
BS 206*	Human Structure and Function II	3
BS 208*	Human Structure and Function Lab II OR PC304 Virtual Physiology Lab II	1
PC 282	Pharm/Tox Orientation II	1
CH 346	Biochemistry	4
PH 316	Pharmaceutics and Biopharmaceutics I	3
PH 318	Pharmaceutics Lab	1
PC 320	Techniques in Pharm/Tox	2
CH 356	Molec Biology/Genetics	3
WR 302	Scientific Writing	3
PC 324	Pharm/Tox Seminar I	1
PC 330	Biomethods in Pharm/Tox	3
	General Education Social Sciences Req.	6

FOURTH YEAR AT USCIENCES		
PC 331	Biochem Pharm Tox (Fall)	3
PC 401	Principles of Toxicology I	4
PC 411	Prin Medicinal Chem/Molec Pharmac	4
PC 424	Pharm/Tox Seminar II	1
PC 402	Principles of Toxicology II	4
PC 440	Pharmacology	4
	General Education Humanities Req.	6
	Pharm/Tox Elective	6

* We strongly recommend transfer students to take BS205/207 and BS206/208 in the summer prior to entering USciences as U3 students.

For students transferring prior to Fall 18 the checklist differs from the one reported above; please contact USciences Transfer Advising office for the specific curriculum.

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	
Oral Communication	SOC101	OR USciences course approved for Oral Communication
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	OR 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.

Exhibit 9

TRANSFER ADVISING GUIDE

**Mercer County Community College (MCCC) to University of the Sciences in Philadelphia
A.S. Chemistry → B.S. Biochemistry or B.S. Chemistry or B.S. Pharmaceutical Chemistry**

MCCC Associate in Science Chemistry

USciences Bachelor of Science Biochemistry, Chemistry, Pharmaceutical Chem

MCCC 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
CMN112 Public Speaking	3	CO204 Public Speaking	3
CHE101 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE102 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
CHE201 Organic Chemistry I (serves as Chemistry Elective)	5	CH211 Principles of Organic Chemistry I CH213 Principles of Organic Chemistry Lab I	3 1
CHE202 Organic Chemistry II	5	CH212 Principles of Organic Chemistry II CH214 Principles of Organic Chemistry Lab II	3 1
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Math Elective)	4	MA122 Calculus I	4
MAT152 Calculus II (serves as Math Elective)	4	MA221 Calculus II	4
MAT251 Calculus III (serves as Technical Elective)	4	MA222 Calculus III	4
PHY115 University Physics I (serves as Technical Elective)	4	PY211 Physics I	4
PHY215 University Physics II (serves as Technical Elective)	4	PY212 Physics II	4
BIO101 General Biology I (serves as Technical Elective)	4	BS132 Introductory Biology I BS134 Introductory Biology I Lab [BS130 Introductory Biology I for students transferring prior to Fall 19]	3 1
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	66	Credits Accepted	62

Additional Courses Necessary to Enter USciences with Junior (U3) Status in Biochemistry:			
BIO102 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
Total MCCC Credits	70	Total Credits Accepted	66

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 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 departmental review and approval.

CH120-Orientation for the Chemical Sciences (1 cr) will be waived for students transferring to USciences after earning the A.S. in Chemistry. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO</p> <p>MCCC Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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Suggested checklist for 3rd and 4th 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
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
	Free Elective	3
	GenEd Humanities Requirement	3

FOURTH YEAR AT USCIENCES		
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 Social Sciences Requirement	3
	GenEd Humanities Requirement	3
CH 402	Seminar in Chemistry II	1
CH 425	Inorganic and Material Synth Lab	2
	Chemistry Elective	6
	Free Elective	7

Suggested checklist for 3rd and 4th year at USciences for **BS in Pharmaceutical 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 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
	GenEd Humanities Requirement	3

FOURTH YEAR AT USCIENCES		
	Pharmaceutical Chemistry Progr Elect	9
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
CH 464	Pharmaceutical Analytical Chemistry	3
CH 465	Pharmaceutical Analytical Chem Lab	1
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	3
	Free Electives	4

Suggested checklist for 3rd and 4th 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		
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 300	Discussions in Chemistry	1
CH 404	Literature of Chemistry	1
CH 343	Intermediary Metabolic Chemistry	3
CH 444	Biochemistry Laboratory I	1
CH 445	Biochemistry Laboratory II	1
	GenEd Humanities Requirement	3

FOURTH YEAR AT USCIENCES		
CH 401	Seminar in Chemistry I	1
CH 423	Physical Chemistry Lab I	2
BS 461 or BS 306	Cell Biology Human Molecular and Cellular Biology	4 3
	GenEd Social Sciences Requirement	3
CH 402	Seminar in Chemistry II	1
CH 342	Nucleic Acid Biochemistry	3
BS 466	Genetics	4
	GenEd Humanities Requirement	3
	Biochemistry Program Elective	6
	Free Electives	4

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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		CH 300
Information Literacy	BIO102	CH 404
Oral Communication		CH 401
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication		CH 423

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

Exhibit 10

TRANSFER ADVISING GUIDE

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

MCCC Associate in Science Chemistry

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

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
CHE101 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE102 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
CHE201 Organic Chemistry I (serves as Chemistry Elective)	5	CH211 Principles of Organic Chemistry I CH213 Principles of Organic Chemistry Lab I	3 1
CHE202 Organic Chemistry II	5	CH212 Principles of Organic Chemistry II CH214 Principles of Organic Chemistry Lab II	3 1
MAT146 Pre-calculus	4	MA107 Precalculus	3
MAT151 Calculus I (serves as Math Elective)	4	MA122 Calculus I	4
MAT152 Calculus II (serves as Math Elective)	4	MA221 Calculus II	4
MAT251 Calculus III (serves as Technical Elective)	4	MA222 Calculus III	4
PHY115 University Physics I (serves as Technical Elective)	4	PY211 Physics I	4
PHY215 University Physics II (serves as Technical Elective)	4	PY212 Physics II	4
BIO101 General Biology I (serves as Technical Elective)	4	BS132 Introductory Biology I BS134 Introductory Biology I Lab [BS130 Introductory Biology I for students transferring prior to Fall 19]	3 1
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
Choose One:	2	PE101/102 Physical Education I/II	1

HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness			
MCCC credits toward AS	66	Credits Accepted	62
Additional Courses Necessary to Enter USciences with Junior (U3) Status in Biochemistry:			
BIO102 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
Total MCCC Credits	70	Total Credits Accepted	66

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 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 departmental review and approval.

PY100 - Physics Orientation (1 cr) will be waived for students transferring to USciences after earning the A.S. in Chemistry. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

<p>3 credits in Social Sciences: Select ONE</p> <p>ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems</p> <p>6 credits in Humanities: Select TWO</p> <p>Humanities GenEd Elective</p>	<p>GenEd Discipline Requirements – Social Sciences</p> <p>AN103 Introduction to Antropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective</p> <p>GenEd Discipline Requirements – Humanities</p>
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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
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
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
CS 201*	Computer Programming I	3
	GenEd Humanities Requirement	6
	GenEd Social Sciences Requirement	3

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

Suggested checklist for 3rd and 4th 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	6
	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 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 301	Modern Physics I	3
PY 310	Mechanics	3
MA 320	Differential Equations	3
CH 341	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	6
	GenEd Social Sciences Requirement	3
PY 496	Advanced Research in Physics	3
PY 340	Biophysics I	3
PY 305	Physics Seminar	1

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	CHE101 & CHE102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	BIO102	
Oral Communication		PY305
Reasoning & Problem Solving	BIO101	
Technology	BIO101	
Written Communication	PSY101	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.

Exhibit 11

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Physics → B.S. Physics (Physics Gen, Material Sc., Astrophysics Tracks)

MCCC Associate in Science Physics

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

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT151 Calculus I	4	MA122 Calculus I	4
MAT152 Calculus II	4	MA221 Calculus II	4
MAT251 Calculus III	4	MA222 Calculus III	4
MAT252 Differential Equations	4	MA320 Differential Equations	3
MAT208 Linear Algebra <i>(serves as Science Elective)</i>	4	MA316 Linear Algebra	3
PHY115 University Physics I	4	PY211 Physics I	4
PHY215 University Physics II	4	PY212 Physics II	4
PHY225 University Physics III	4	PY213 Physics III	4
CHE101 General Chemistry I <i>(serves as Science Elective)</i>	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE102 General Chemistry II <i>(serves as Science Elective)</i>	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
COS101 Introduction to Computer Science <i>(serves as Technology Elective)</i>	4	CS201 Computer Programming I	3
Social Science GenEd Elective Choose One	3	<i>(serves as GenEd Social Sciences Requirement)</i>	3
Humanities GenEd Elective Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	<i>(serves as GenEd MD Requirement)</i>	3
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	64	Credits Accepted	60
Total MCCC Credits	64	Total Credits Accepted	60

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 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 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 Physics. 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

3 credits in Social Sciences: Select ONE ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems	GenEd Discipline Requirements – Social Sciences AN103 Introduction to Anthropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective
6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective	GenEd Discipline Requirements – Humanities

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
	GenEd Social Sciences Requirement	3
PY 301	Modern Physics I	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 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3
FOURTH YEAR AT USCIENCES		
PY 420	Optics and Wave Phenomena	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Humanities Requirement	6
PY 496	Advanced Research in Physics	3
	Physics Elective	6
	Physics/Chemistry/Biology Elective	3
PY 305	Physics Seminar	3
	Free Electives	10

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
PY 301	Modern Physics I	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 480	Introduction to Material Science	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 470	Solid State Physics	3
PY 496	Advanced Research in Physics	3
PY 440	Intro to Nano Science	3
	Free Electives	10
	Physics/Chemistry/Biology Elective	3
PY 305	Physics Seminar	3

Suggested checklist for 3rd and 4th 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)

THIRD YEAR AT USCIENCES		
ST 320	Introduction to Probability	3
PY 301	Modern Physics I	3
PY 310	Mechanics	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
MA 430	Differential Geometry	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

FOURTH YEAR AT USCIENCES		
PY 410	Electricity and Magnetism	3
PY 463	Physics of Stars and Black Holes	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 465	Intro to Cosmology	3
PY 496	Advanced Research in Physics	3
	Free Electives	10
PY 420	Optics and Wave Phenomena	3
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) 7 credits	CHE101 & CHE102
Mathematics 6 credits	MAT151 & MAT152
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 Two USciences Courses: 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: Humanities GenEd Elective Choose One: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	PHY115	
Technology	PHY115	
Written Communication	PSY101	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.

Exhibit 12

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia
A.S. Engineering Science → B.S. Physics (Physics Gen, Material Sc., Astrophysics Tracks)

MCCC Associate in Science Engineering Science

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

MCCC 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
CMN112 Public Speaking	3	CO204 Public Speaking	3
MAT151 Calculus I	4	MA122 Calculus I	4
MAT152 Calculus II	4	MA221 Calculus II	4
MAT251 Calculus III	4	MA222 Calculus III	4
MAT252 Differential Equations	4	MA320 Differential Equations	3
CHE101 General Chemistry I	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE102 General Chemistry II	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
PHY115 University Physics I	4	PY211 Physics I	4
PHY215 University Physics II	4	PY212 Physics II	4
PHY225 University Physics III	4	PY213 Physics III	4
CIV103 Statics	3	PY455 Intro to Fluidynamics	3
CIV230 Mechanics of Solids	4	PY310 Mechanics	3
ENT116 Engineering Graphics OR DRA190 Intro to Computer-Aided Drafting	2	MIX01 Misher Elective	2
COS101 Introduction to Computer Science	4	CS201 Computer Programming I	3
ECO112 Microeconomics	3	EC201 Intro to Microeconomics (serves as GenEd Social Science Requirement)	3
GenEd Elective (either Historical Perspective or Humanities) Choose One:	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Historical Perspective or Humanities) Choose One:	3	(serves as GenEd MD Requirement)	3
MCCC credits toward AS	67	Credits Accepted	64
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
Total MCCC Credits	69	Total Credits Accepted	65

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 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 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 Engineering 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 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 Social Sciences
- 6 credits in Humanities

Some or all of these 9 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 9 credits are taken at MCCC, they should be selected from the following lists:

3 credits in Social Sciences: Select ONE ANT101 Anthropology ECO103 Basic Economics ECO111 Macroeconomics ECO112 Microeconomics GEO101 Geography GEO102 Cultural Geography POL101 The American Political System POL102 State and Local Government POL201 International Relations PSY101 Introduction to Psychology PSY206 Child Development PSY207 Developmental Psychology SOC101 Introduction to Sociology SOC107 Social Problems	GenEd Discipline Requirements – Social Sciences AN103 Introduction to Anthropology ECX01 Economics Elective EC101 Intro to Macroeconomics EC101 Intro to Microeconomics SSX01 Social Science Elective SSX01 Social Science Elective PO101 Intro to Pol Sci and Amer Gov POX01 Political Science Elective POX01 Political Science Elective PS101 Intro to Psychology PSX01 Psychology Elective PS200 Psych of Human Development SO101 Introduction to Sociology SOX01 Sociology Elective
6 credits in Humanities: Select TWO MCCC Humanities GenEd Elective	GenEd Discipline Requirements – Humanities

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
MA 316	Linear Algebra	3
	GenEd Social Sciences Requirement	3
PY 301	Modern Physics I	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 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3
FOURTH YEAR AT USCIENCES		
PY 420	Optics and Wave Phenomena	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Humanities Requirement	6
PY 496	Advanced Research in Physics	3
	Physics Elective	3
	Physics/Chemistry/Biology Elective	3
PY 305	Physics Seminar	3
	Free Electives	8

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
MA 316	Linear Algebra	3
PY 301	Modern Physics I	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 480	Introduction to Material Science	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 470	Solid State Physics	3
PY 496	Advanced Research in Physics	3
PY 440	Intro to Nano Science	3
	Free Electives	8
PY 305	Physics Seminar	3

Suggested checklist for 3rd and 4th 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)

THIRD YEAR AT USCIENCES		
ST 320	Introduction to Probability	3
MA 316	Linear Algebra	3
PY 301	Modern Physics I	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
MA 430	Differential Geometry	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

FOURTH YEAR AT USCIENCES		
PY 410	Electricity and Magnetism	3
PY 463	Physics of Stars and Black Holes	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 465	Intro to Cosmology	3
PY 496	Advanced Research in Physics	3
	Free Electives	5
PY 420	Optics and Wave Phenomena	3
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) 7 credits	CHE101 & CHE102
Mathematics 6 credits	MAT151 & MAT152
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	ECO112 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 Two USciences Courses: 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: GenEd Elective (either Hist persp or Humanit) Choose One: GenEd Elective (either Hist persp or Humanit)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	PHY115	
Technology	PHY115	
Written Communication	PSY101	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.

Exhibit 13

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia A.S. Mathematics → B.S. Physics (Physics Gen, Material Sc., Astrophysics Tracks)

MCCC Associate in Science Mathematics

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

MCCC 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
CMN111 Speech: Human Communication OR CMN112 Public Speaking	3	CO101 Intro to Communication OR CO204 Public Speaking	3
MAT151 Calculus I	4	MA122 Calculus I	4
MAT152 Calculus II	4	MA221 Calculus II	4
MAT251 Calculus III	4	MA222 Calculus III	4
MAT252 Differential Equations	4	MA320 Differential Equations	3
MAT208 Linear Algebra (serves as Math Elective)	4	MA316 Linear Algebra	3
COS101 Introduction to Computer Science (substitutes World Language Elective)	4	CS201 Computer Programming I	3
CHE101 General Chemistry I (serves as Science Elective)	4	CH111 Principles of Chemistry I CH113 Principles of Chemistry Lab I	3 1
CHE102 General Chemistry II (serves as Science Elective)	4	CH112 Principles of Chemistry II CH114 Principles of Chemistry Lab II	3 1
Social Science GenEd Elective Choose One	3	(serves as GenEd Social Sciences Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd Humanities Requirement)	3
World Language Elective Choose One	3	(serves as GenEd Humanities Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
PHY115 University Physics I (serves as Elective)	4	PY211 Physics I	4
PHY215 University Physics II (serves as Elective)	4	PY212 Physics II	4
Choose One: HPE110 Concepts of Health and Fitness HPE111 Living with Health CSW100 College Success and Personal Wellness	2	PE101/102 Physical Education I/II	1
MCCC credits toward AS	66	Credits Accepted	62
Total MCCC Credits	66	Total Credits Accepted	62

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 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 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 Mathematics. 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 Social Sciences

These 3 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 3 credits are taken at MCCC, they should be selected from the following lists:

3 credits in Social Sciences: Select ONE	GenEd Discipline Requirements – Social Sciences
ANT101 Anthropology	AN103 Introduction to Antropology
ECO103 Basic Economics	ECX01 Economics Elective
ECO111 Macroeconomics	EC101 Intro to Macroeconomics
ECO112 Microeconomics	EC101 Intro to Microeconomics
GEO101 Geography	SSX01 Social Science Elective
GEO102 Cultural Geography	SSX01 Social Science Elective
POL101 The American Political System	PO101 Intro to Pol Sci and Amer Gov
POL102 State and Local Government	POX01 Political Science Elective
POL201 International Relations	POX01 Political Science Elective
PSY101 Introduction to Psychology	PS101 Intro to Psychology
PSY206 Child Development	PSX01 Psychology Elective
PSY207 Developmental Psychology	PS200 Psych of Human Development
SOC101 Introduction to Sociology	SO101 Introduction to Sociology
SOC107 Social Problems	SOX01 Sociology Elective

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
PY 213	Physics III	4
	GenEd Social Sciences Requirement	3
PY 301	Modern Physics I	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 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

FOURTH YEAR AT USCIENCES		
PY 420	Optics and Wave Phenomena	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
PY 496	Advanced Research in Physics	3
	Physics Elective	6
	Physics/Chemistry/Biology Elective	3
PY 305	Physics Seminar	3
	Free Electives	10

Suggested checklist for 3rd and 4th 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		
ST 320	Introduction to Probability	3
PY 213	Physics III	4
PY 301	Modern Physics I	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 480	Introduction to Material Science	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 470	Solid State Physics	3
PY 496	Advanced Research in Physics	3
PY 440	Intro to Nano Science	3
	Free Electives	10
	Physics/Chemistry/Biology Elective	3
PY 305	Physics Seminar	3

Suggested checklist for 3rd and 4th 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)

THIRD YEAR AT USCIENCES		
ST 320	Introduction to Probability	3
PY 213	Physics III	4
PY 301	Modern Physics I	3
PY 310	Mechanics	3
PY 370	Math Methods for Phys Sci I	3
PY 380	Electronics	3
PY 406	Advanced Lab	1
MA 430	Differential Geometry	3
PY 450	Quantum Mechanics	3
PY 371	Math Methods for the Phys Sci II	3

FOURTH YEAR AT USCIENCES		
PY 410	Electricity and Magnetism	3
PY 463	Physics of Stars and Black Holes	3
PY 495	Undergraduate Research in Physics	2
PY 431	Statistical Mechanics	3
	GenEd Social Sciences Requirement	3
	GenEd Humanities Requirement	6
PY 465	Intro to Cosmology	3
PY 496	Advanced Research in Physics	3
	Free Electives	10
PY 420	Optics and Wave Phenomena	3
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) 7 credits	CHE101 & CHE102
Mathematics 6 credits	MAT151 & MAT152
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111 or CMN112
Social Sciences 6 credits	Choose One: Social Science GenEd Elective 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 GenEd Elective Choose One: World Language Elective
Multidisciplinary Inquiry 6 credits (may be substituted by Social Sciences &/or Humanities courses)	Choose Two: GenEd Elective (either Soc Sc or Humanities)
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	PHY115	
Technology	PHY115	
Written Communication	PSY101	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.

Exhibit 14

TRANSFER ADVISING GUIDE

Mercer County Community College (MCCC) to University of the Sciences in Philadelphia
A.S. Business Administration – General Business → B.S. in Pharmaceutical & Healthcare Business

MCCC Associate in Science Business Administration

USciences Bachelor of Science Pharmaceutical & Healthcare Business

MCCC 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
CMN111 Speech: Human Communication	3	CO101 Intro to Communication	3
MAT146 Pre-calculus	4	MA107 Precalculus (replaces MA104)	3
MAT151 Calculus I	4	MA110 General Calculus	3
BUS107 Business law I	3	PB315 Business Law	3
BUS230 Global Environment of Business	3	PBX01 Business Elective	3
BUS205 Business Statistics I	3	STX01 Statistics Elective	3
BUS206 Business Statistics II	3	STX01 Statistics Elective (replaces ST310)	3
ECO111 Macroeconomics	3	EC101 Intro to Macroeconomics	3
ECO112 Microeconomics	3	EC201 Intro to Microeconomics	3
ACC111 Principles of Financial Accounting	3	PB316 Accounting Theory	3
ACC112 Principles of Managerial Accounting	3	PB317 Managerial Accounting	3
IST101 Computer Concepts with Applications OR IST102 Computer Concepts with Programming	3	CSX01 Computer Science Elective (serves as Elective)	3
BIO101 General Biology I (serves as Lab Science Elective)	4	BS109 General Biology I BS110 General Biology I Lab [BS103 General Biology I for students transferring prior to Fall 19]	3 1
PHI204 Ethics (serves as GenEd Elective)	3	ET303 Ethics & Crit. Thought (replaces ET313) (serves as GenEd Humanities Requirement)	3
Humanities GenEd Elective Choose One	3	(serves as GenEd Humanities Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
GenEd Elective (either Soc Sc or Humanities) Choose One	3	(serves as GenEd MD Requirement)	3
HPE110 Concepts of Health and Fitness Or	2	PE101/102 Physical Education I/II	1

CSW100 College Success and Personal Wellness			
MCCC credits toward AS	62	Credits Accepted	59
Additional Courses Necessary to Enter USciences with Junior (U3) Status:			
BIO102 General Biology II	4	BS119 General Biology II BS120 General Biology II Lab [BS104 General Biology II for students transferring prior to Fall 19]	3 1
MKT101 Principles of Marketing	3	PB319 Intro to Marketing Management	3
Total MCCC Credits	69	Total Credits Accepted	66

A minimum 2.5 cumulative GPA is required for admission.

Transfer students are required to participate in a weekend retreat (Friday 3 PM to Sunday 3 PM) early in their first semester at USciences.

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 CCC for advising.

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		
PB120	Intro to Business Seminar	2
BS205	Human Structure & Function I	3
BS206	Human Structure & Function II	3
PB242	Health Care System	2
PB243	Health Care System II	2
PB323	Principles of Management	3
WR303	Professional Writing	3
PA335	Marketing Applications in the Clinical Use of Drugs I	3
PB383	Special Topics in Pharmaceutical and Health Care Business II	2
PA336	Marketing Applications in The Clinical Use of Drugs II	4
PB382	Special Topics in Pharmaceutical and Health Care Business I	2
PB478	Market Research	3

FOURTH YEAR AT USCIENCES		
PB318	Financial Management	3
PB452	Legal Aspects of Drug Development, Production and Management	2
PB483	Special topics in PHB IV	2
PB490	Senior Thesis Methodology	2
	Business Elective	5
PA564 OR PA465	Applied Pharmacoeconomics (Fall) OR Pharmacoeconomic Considerations in Medication Selections and Use (Spring)	2
PB435	Advertising & Promotion	3
PB437	International Marketing	2
PB482	Special Topics in PHB III	2
PB491	Senior Thesis	3

Progress in Completing USciences' General Education Curriculum

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Discipline Requirements (minimum of 41 credits)

Discipline Requirement	Community College Courses / / USciences Courses*
Natural Science (ONE semester of lab required) 7 credits	BIO101 & BIO102
Mathematics 6 credits	MAT146 & MAT151
Communication (written & oral) 9 credits	ENG101 & ENG102 & CMN111
Social Sciences 6 credits	ECO111 & ECO112
Humanities 6 credits	PHI204 Humanities GenEd Elective Choose One
Multidisciplinary Inquiry 6 credits (may be substitute by Social Sciences &/or Humanities courses)	GenEd Elective (either Soc Sc or Humanities) Choose Two
Physical Education 1 credit	HPE110 or HPE111 or CSW100

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	PHI204	or USciences course approved for Ethics
Information Literacy	BIO112	
Oral Communication	SOC101	or USciences courses approved for Oral Comm
Reasoning & Problem Solving	BIO111	
Technology	BIO111	
Written Communication		WR303

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