

**Appendix A**  
**PCCC A.S.L.A. Biology Option to WPU B.S. Biotechnology**

PCCC Courses – A.S.L.A.			WPU Equivalency B.S.		
Course Code	Course Name	Cr	Course Code	Course Name	Cr
<b>Semester 1</b>					
BS 101	Biology I	4	BIO 1630	General Biology: Cell, Molecular and Genetics	4
CH 111	General Chemistry I	4	CHEM 1600	General Chemistry I	4
EN 101	Composition I	3	ENG 1100	College Writing	3
MA 109 or MA 120 or MA 121 or MA 201 or MA 202	Pre-Calculus Mathematics or Calculus I or Calculus II or Calculus III or Differential Equations	4	MATH 1160 or MATH 1600 or MATH 1610 or MATH 2010 or MATH 3220	Pre-Calculus or Calculus I or Calculus II or Calculus III or Differential Equations	4
Semester Credits		15	Semester Credits		15
<b>Semester 2</b>					
BS 102	Biology II	4	BIO 1620	General Biology: Evolution, Ecology and Biodiversity	4
CH 112	General Chemistry II	4	CHEM 1620	General Chemistry II	4
EN 102	Composition II	3	ENG 1500	Experiences in Literature	3
MA 109 or MA 120 or MA 121 or MA 201 or MA 202	Pre-Calculus Mathematics or Calculus I or Calculus II or Calculus III or Differential Equations	4	MATH 1160 or MATH 1600 or MATH 1610 or MATH 2010 or MATH 3220	Pre-Calculus or Calculus I or Calculus II or Calculus III or Differential Equations	4
Semester Credits		15	Semester Credits		15
<b>Semester 3</b>					
CIS 101 or CIS 107	Computer Concepts and Applications or Information Technology Fundamentals & Applications	3	CS 2010 or CS 2010	Computer & Information Technology or Computer & Information Technology	3
	Social Science Course	3		Equivalent Social Science Course	3
	Humanities Course	3		Equivalent Humanities Course	3
BS 103 or BS 104 or BS 203 or	Anatomy & Physiology I or Anatomy & Physiology II or Microbiology or	3-4	BIO 1180 or BIO 1190 or BIO 1700 or	Basic Anatomy & Physiology I or Basic Anatomy & Physiology II or Basic Microbiology or	3-4

BS 207 or BS 212 or SC 104  or SC 206 or SC 202	Cell Biology or Biology of Aging or Introduction to Environmental Science or Environmental Ethics or Introduction to Geology		BIO 2050 or  ENV 1100  or  ENV 1150	Cell Biology or Free Elective/minor course or Environmental Sustainability  or Free Elective/minor course or General Geology	
CH 211 or PY 101 or PY121	Organic Chemistry I or College Physics I or Physics I	4	CHEM 2570 or PHYS 2550 or PHYS 2600	Organic Chemistry I or College Physics I or General Physics I	4
Semester Credits		16-17	Semester Credits		16-17
<b>Semester 4</b>					
SC 290	Select Topics in Science	3		Degree credit	3
CH 212 or PY 102 or PY 121	Organic Chemistry II or College Physics II or Physics II	4	CHEM 2580 or PHYS 2560 or PHYS 2610	Organic Chemistry II or College Physics II or General Physics II	4
BS 103 or BS 104 or BS 203 or BS 207 or BS 212 or SC 104  or SC 206 or SC 202	Anatomy & Physiology I or Anatomy & Physiology II or Microbiology or Cell Biology or Biology of Aging or Introduction to Environmental Science or Environmental Ethics or Introduction to Geology	3-4	BIO 1180 or BIO 1190 or BIO 1700 or BIO 2050 or  ENV 1100  or  ENV 1150	Basic Anatomy & Physiology I or Basic Anatomy & Physiology II or Basic Microbiology or Cell Biology or Free Elective/minor course or Environmental Sustainability  or Free Elective/minor course or General Geology	3-4
	Humanities or Social Science Course	3		Equivalent Humanities or Social Science Course	3
Semester Credits		13-14	Semester Credits		13-14
<b>Credit Total</b>		<b>60</b>	<b>60 Credits Required for the Major</b>		
<b>Semester 5</b>					
			BIO 2050	Cell Biology (Major Requirement)	4

BIO 2060	General Genetics (Major Requirement)	4
MATH 2300	Statistics I	4
	World Language I	3
Semester Credits		15
Semester 6		
BIO 3200	Microbiology (Major Requirement)	4
BIO 4310	Cell and Tissue Culture (Major Requirement)	4
	Elective/minor course	4
	World Language II	3
Semester Credits		15
Semester 7		
BIO 4240	Molecular Biology (Major Requirement)	4
BIO 4300	Biotechnology: DNA	4
	Plant/Major Elective	4
	Elective/minor course	3
Semester Credits		15
Semester 8		
BIO 4800 or BIO 4990	Biology Seminar or Independent Study	4
BIO 5340	Genomics & Bioinformatics	4
	Plant/Major Elective	4
	Free Elective/minor course	3
Semester Credits		15
<b>Credit Total</b>		<b>120</b>

**Biotechnology Major Electives**

CHEM 4270 Biochemistry  
 BIO 3020 Human Heredity  
 BIO 3080 Animal Physiology  
 BIO 3180 Microbiology  
 BIO 3330 Field Entomology  
 BIO 3350 Field Botany  
 BIO 3400 Ecology  
 BIO 3450 Conservation Biology  
 BIO 3500 Animal Behavior  
 BIO 3520 Economic Botany  
 BIO 3610 General Botany  
 BIO 3650 Plant Physiology  
 BIO 3720 Mathematical Models in the Biological Sciences  
 BIO 3950 Honors Literature Seminar  
 BIO 3990 Selected Topics  
 BIO 4020 Aquatic Ecology  
 BIO 4110 Physiology of Human Reproduction and Fertility  
 BIO 4150 Evolutionary Physiology

BIO 4160 Comparative Animal Physiology BIO 4170 Histology BIO 4210 Developmental Biology BIO 4220 Human Physiology BIO 4240 Molecular Biology BIO 4300 Biotechnology: DNA BIO 4340 Geonomics and Bioinformatics BIO 4430 Evolutionary Medicine BIO 4500 Molecular Biology of Prokaryotes BIO 4600 Pharmacology BIO 4630 Terrestrial Plant Ecology BIO 4700 Bioethics BIO 4740 Neuroscience BIO 4800 Biology Seminar BIO 4840 Scanning Electron Microscopy BIO 4850 Transmission Electron Microscopy
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<b>Plant Electives</b>
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BIO 3610 General Botany BIO 3650 Plant Physiology BIO 3350 Field Botany BIO 4630 Terrestrial Plant Ecology
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- Notes: 1. William Paterson University will accept all associate degree credits under this program-to-program articulation agreement, including up to half of the William Paterson University major required credits, from New Jersey community college students who enroll at William Paterson University
2. William Paterson University recommends students to take two semesters of one foreign language at the community college. Two semesters of American Sign Language can also fulfill the foreign language requirement.
3. WP Online students should always refer to the semester course schedule when choosing electives, as elective course offerings may vary each semester.

Effective 3/12/2024