

## Appendix C

### Associate of Science in Biotechnology at Bergen Community College and Bachelor of Science in Biotechnology at William Paterson University, College of Science and Health

Bergen Courses AS	Credits	WP Equivalency BS
<b>Semester 1</b>		
Humanities Elective	3	Equivalent Humanities Credit
Information Technology Elective	3	Equivalent Information Technology Credit
ENG101 English Composition I	3	ENG1100 College Writing
BIO 101 General Biology I	4	BIO 1630 General Biology: Cell, Molecular, and Genetics
CHM 140 General Chemistry I	3	CHEM1600 General Chemistry I
CHM 141 General Chemistry Lab	1	
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<b>Semester 2</b>		
ENG 201 English Composition II	3	ENG1500 Experiences in Literature
BIO 203 General Biology II	4	BIO1620 General Biology
CHM 240 General Chemistry II	3	CHEM1620 General Chemistry II
CHM 241 General Chemistry II Lab	1	
MAT 268 Statistical Methods	4	MATH2300 Statistics I
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<b>Semester 3</b>		
Free Elective (Recommended World Language I for WP requirement)	3	Equivalent World Language I Credit
Social Science Elective	3	Equivalent Social Science Credit
BIO 210 Introduction to Biotechnology	4	Degree Credit
MAT 180 Precalculus: College Algebra and Trigonometry	4	MATH1160 Precalculus
<b>14</b>		
<b>Semester 4</b>		
Free Elective (Recommended World Language II)	3	Equivalent World Language II Credit
Humanities Elective	3	Equivalent Humanities Credit
BIO 211 Introduction to Bioinformatics	3	Degree Credit

MAT 280 Calculus I	4	MATH1600 Calculus I
Communication Elective: COM 100 Speech Communication or COM 102 Public Speaking	3	COMM1100 Communication in Action or COMM2630 Public Speaking

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**WP BS: Biotechnology (72 to74 credits for the major)**

**Semester 5**

4	BIO 2050 Cell Biology
4	BIO 2060 General Genetics
3	MATH 1610 Calculus II or MATH 2300 Statistics I or MATH 3720 Mathematical Models for Biological Sciences
4	CHEM 2570 Organic Chemistry I

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**Semester 6**

4	BIO 3200 Microbiology
3	Biotechnology Major Elective*
4	CHEM 2580 Organic Chemistry II
4	BIO 4310 Cell and Tissue Culture

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**Semester 7**

4	CHEM 4270 Biochemistry
4	BIO 4300 Recombinant DNA Technology
3	BIO 4240 Molecular Biology
4	PHYS 2550 College Physics I or PHYS 2600 General Physics I

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**Semester 8**

3	Biotechnology Major Plant Elective**
3	BIO 4800 Biology Seminar or BIO 4990 Independent Study
4	PHYS2560 College Physics II or PHYS 2610 General Physics II
3	Choose a free elective
3	Choose a free elective
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**\*WP Biotechnology Major Elective**

Select one course:

BIO 3020 Human Heredity

BIO 3080 Animal Physiology

BIO 3180 Zoology

BIO 3200 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

**\*\* WP Biotechnology Major Plant Elective**

Select one course:

BIO 3350 Field Botany

BIO 3610 General Botany

BIO 3650 Plant Physiology

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 Recombinant DNA Technology  
  
BIO 4310 Cell and Tissue Culture  
  
BIO 4340 Geonomics and Bioinformatics  
  
BIO 4430 Evolutionary Medicine  
  
BIO 4440 Evolution  
  
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

**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 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 check with their advisor and/or refer to the semester course schedule when choosing electives, as elective course offerings may vary each semester.