Table 1 Biology Program Majors		
Primary Major	Term	Total
Biology	Fall Semester 2012	69
	Spring Semester 2013	52
	Summer Semester 2013	13
	Fall Semester 2013	61
	Spring Semester 2014	64
	Summer Semester 2014	12
	Fall Semester 2014	58
	Spring Semester 2015	60
	Summer Semester 2015	16
	Fall Semester 2015	79
	Spring Semester 2016	86
	Summer Semester 2016	16
	Fall Semester 2016	*
	Spring Semester 2017	*
	Summer Semester 2017	*
Education with Biology Certification	Fall Semester 2012	1
	Spring Semester 2013	1
	Fall Semester 2013	1
	Spring Semester 2014	1
	Fall Semester 2014	2
	Spring Semester 2015	1
*repeated attempts to gather this data were unsuccessful, as of the date of this review the 2016-2017 data has not been published on the Intuitional Research web site.		

Table 2 Biology Graduates – Number by Year			
Academic Year	Biology	Education with Biology Certification	Total
2012-13	9	1	10
2013-14	10	1	11
2014-15	13	2	15
2015-16	8	1	9
2016-17	13	1	13
Grand Total	53	6	59

Table 3
Biology Program Total Course Enrollments

	2012-2013		2013-2014		2014-2015		2015-2016		2016-2017			
Course	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Sum	Total
1105 Biological Principles I	138		127		113		121		127			626
1106 Biological Principles II		89		84		96		106		106		481
2202 General Botany		22		23		23		25		27		120
2203 General Zoology	32		29		25		24		29			139
2224 Microbiology		28				22				39		89
3306 Fundamentals of Ecology	8		13		14		12		15			62
3312 Advanced Botany I					14						12	26
3312 Advanced Botany II	12											12
3315 Invertebrate Zoology									9			9
3316 Vertebrate Zoology			15				12					27
3360 Biochemistry		16		21		19		22		30		108
3368 Animal Physiology		13				14			22			49
3370 Plant Physiology			8				8					16
3380 Genetics	26		20		27		46		48			167
3390 Molecular Biotechnology		16		15		16		24		18		89
4420 Developmental Biology				16				16				32
4485 Senior Seminar		9		8		12		8		13		50
4485 Senior Seminar-Honors				2		1						3
4495 Problems in Biological Science	3	6	8	4	3	4	1	5	1	1		36
4998 Undergraduate Research				1	1	5		1	1	1		10
Grand Total	**219**	**199**	**220**	**174**	**197**	**212**	**224**	**207**	**252**	**235**	**12**	**2151**

Table 4
Service Course Total Enrollments

	2012-2013			2013-2014			2014-2015			2015-2016			2016-2017			
Course	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su	F	Sp	Su	Total
BIOL 1104 Biosphere	14	17		25	24		27	17		27	17		25	17		210
BIOL 1104 Biosphere - Honors		2			3			7			2			3		17
BIOL 1180 Human Anatomy & Physiology													33	55		88
BIOL 1180 Human Anatomy & Physiology - Honors													6			6
BIOL 1180 Human Anatomy & Physiology - Online												33			32	65
BIOL 1181 Human Anatomy & Physiology Lab													40	55		95
BIOL 1181 Human Anatomy & Physiology Lab - Online												30			36	66
BIOL 1199 ST: Anatomy & Physiology - Online			13			11	18		18							60
BIOL 1199 ST: Anatomy & Physiology Lab			7			20	10									37
BIOL 2205 Tech Microbiology	74	82		88	88		73	30								435
BIOL 2205 Tech Microbiology - Honors		3			6			6								15
BIOL 2205 Tech Microbiology Lecture							34			66			68	57		225
BIOL 2205 Tech Microbiology Lecture - Honors														3		3
BIOL 2206 Tech Microbiology Lab										22			23			45
SCIE 1100 Human Biology	172	131	11	128	89		124	76		88	48		75	45		987
SCIE 1103 Science That Matters	171	179		173	173		161	152		119	76		69	65		1338
SCIE 1103 Science That Matters-Honors	15			16			15									46
SCIE 1105 Environmental Science		23			24			22			22			17		108
SCIE 1107 Geographic Information Systems		10			15						10			7		42
SCIE 1110 Chemistry of Life	23	8														31
SCIE 1199 Evltn of Ethcs, Asth, Hum Natr	44	27														71
SCIE 1199 ST: Evolution & Hum Nature-Hon		5														5
SCIE 1221 Evolution and Human Nature					31		48	24		30	14		10	10		167
SCIE 1221 Evolution and Human Nature-Honors					20			9		15	9		16			69
Grand Total	**513**	**487**	**31**	**430**	**473**	**31**	**510**	**343**	**18**	**367**	**198**	**63**	**365**	**334**	**68**	**4231**

Table 5a
Service Couse Success Rates – BIOL courses
Pass(A,B,C,D) vs. Fail (W,F,I,NR)

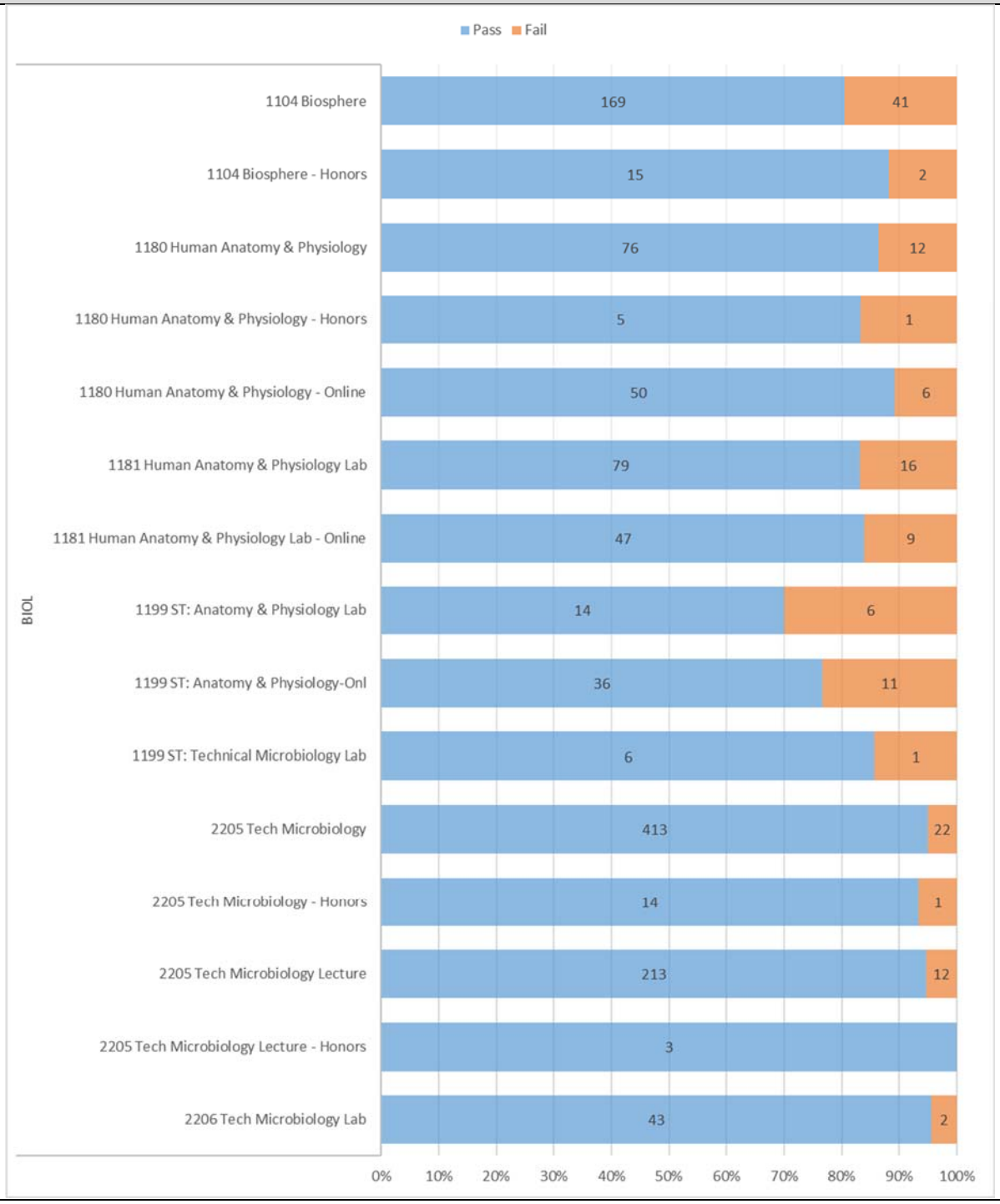


Table 5b
Service Couse Success Rates – SCIE courses
Pass(A,B,C,D) vs. Fail (W,F,I,NR)

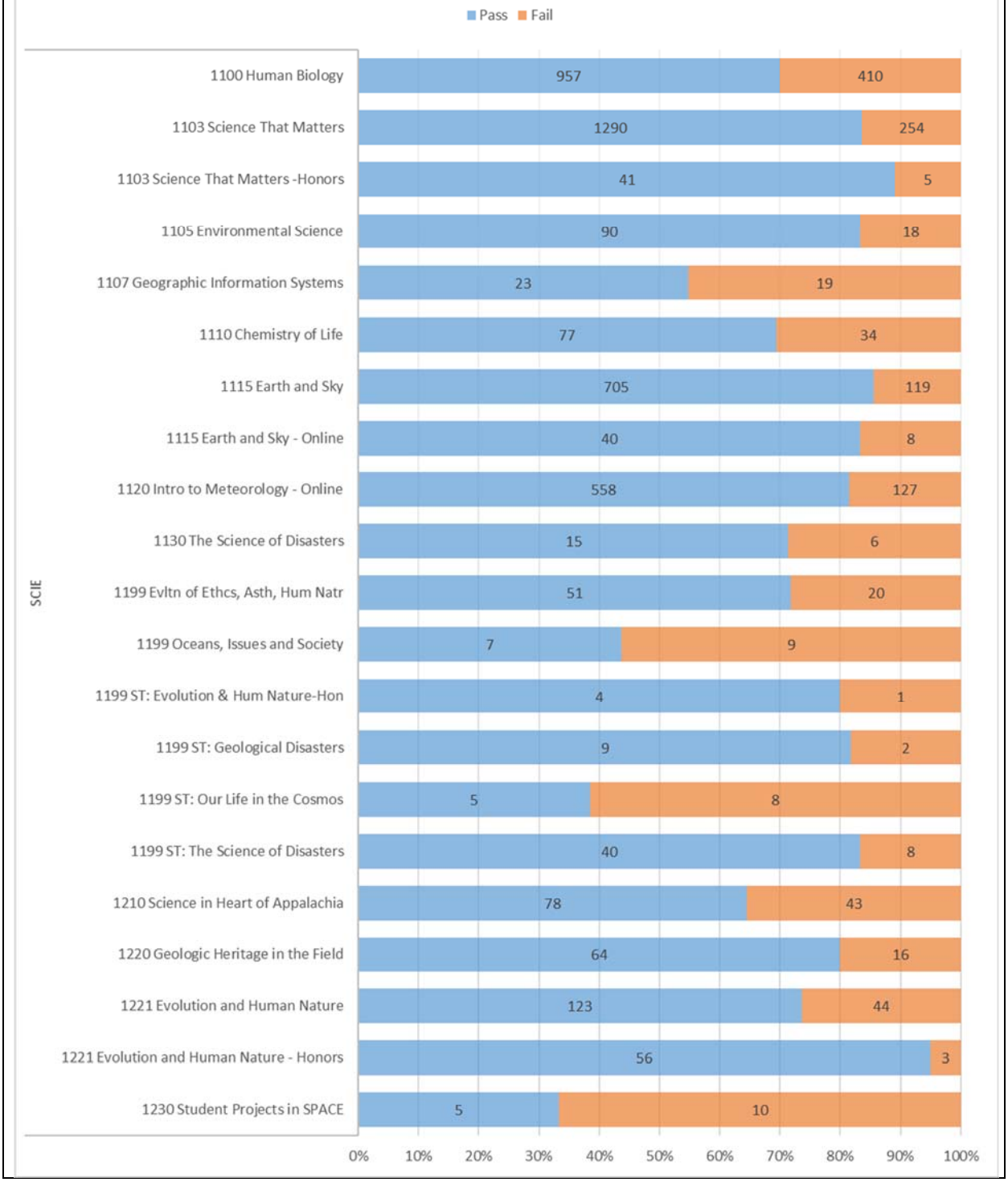


Table 6 Biology Program Graduates		
Test Year	**ID**	**Current status**
2013	001	
	002	Dental school at WVU
	003	
	004	Environmental law degree from school in Maine
	005	Works at dermatologist selling chemical treatments
	006	PT school
	007	Grad school
	008	PT school
	009	
2014	001	Enrolled in Vet school in the Caribbean
	002	
	003	Went to DO school in Lewisburg
	004	Employed at Mylan
	005	Enrolled in PA program
	006	PT school
	007	high school science teacher
	008	went to DO school in Lewisburg
	009	dental school at WVU
	010	
2015	001	works in Bridgeport for a company that has a space contract
	002	
	003	Medical school in Caribbean
	004	
	005	
	006	
	007	
	008	
	009	
	010	
	011	
	012	
	013	Applying to PA school
2016	001	
	002	Applying in med school
	003	Enrolled in medical school at WVU
	004	
	005	

	006	
	007	Enrolled in Medical school WVSOM
	008	
2017	001	accepted into accelerated nursing program at WVU
	002	
	003	
	004	Employed at Mylan
	005	grad school at George Mason University
	006	
	007	
	008	
	009	
	010	
	011	
	012	
	013	Enrolled in grad school at WVU

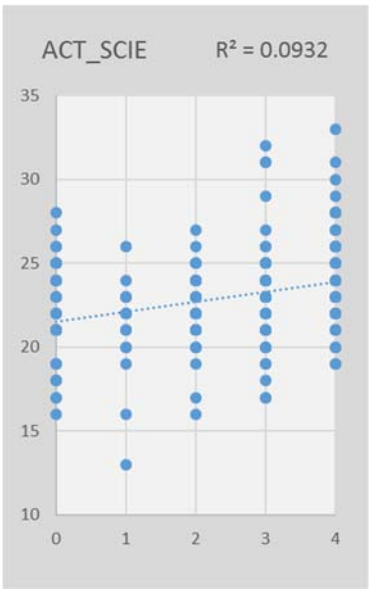
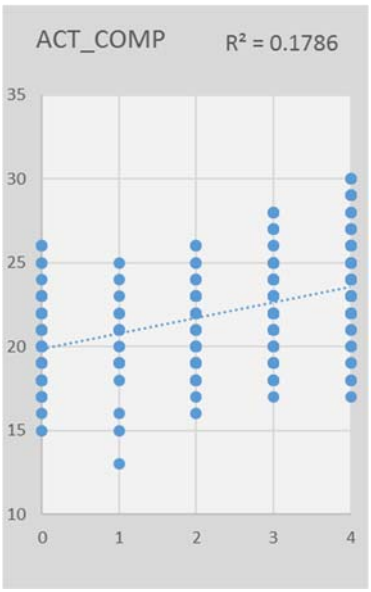
Table 7a On Campus and off Campus Course Enrollment – Biology Courses		
CAMPUS	**Course**	**Enrollment**
Fairmont	BIOL 1104 Biosphere	210
	BIOL 1104 Biosphere - Honors	17
	BIOL 1105 Biological Principles I	626
	BIOL 1106 Biological Principles II	481
	BIOL 1180 Human Anatomy & Physiology	88
	BIOL 1180 Human Anatomy & Physiology - Honors	6
	BIOL 1199 ST: Forensic Biology	9
	BIOL 1199 ST: Forensics	1
	BIOL 1199 ST: Intro to Forensic Science	15
	BIOL 2202 General Botany	120
	BIOL 2203 General Zoology	139
	BIOL 2205 Tech Microbiology	435
	BIOL 2205 Tech Microbiology - Honors	15
	BIOL 2205 Tech Microbiology Lecture	225
	BIOL 2205 Tech Microbiology Lecture - Honors	3
	BIOL 2224 Microbiology	89
	BIOL 3306 Fundamentals of Ecology	62
	BIOL 3312 Advanced Botany I	26
	BIOL 3312 Advanced Botany II	12
	BIOL 3315 Invertebrate Zoology	9
	BIOL 3316 Vertebrate Zoology	27
	BIOL 3360 Biochemistry	108
	BIOL 3368 Animal Physiology	49
	BIOL 3370 Plant Physiology	16
	BIOL 3380 Genetics	167
	BIOL 3390 Molecular Biotechnology	89
	BIOL 4420 Developmental Biology	32
	BIOL 4485 Senior Seminar	50
	BIOL 4485 Senior Seminar-Honors	3

	BIOL 4495 Problems in Biological Sci - Honors	3
	BIOL 4495 Problems in Biological Science	36
	BIOL 4998 Undergraduate Research	10
	BIOL 4998 Undergraduate Research - Honors	9
Fairmont Total		**3187**
Virtual On-Line Campus	BIOL 1180 Human Anatomy & Physiology - Online	65
	BIOL 1199 ST: Anatomy & Physiology - Online	60
Virtual On-Line Campus Total		**125**
Grand Total		**3312**

Table 7b On Campus and off Campus Course Enrollment – SCIE Courses		
CAMPUS	**Course**	**Enrollment**
Caperton Center - Clarksburg	SCIE 1100 Human Biology	304
	SCIE 1110 Chemistry of Life	80
	SCIE 1115 Earth and Sky	136
Caperton Center - Clarksburg Total		**520**
Fairmont	SCIE 1100 Human Biology	987
	SCIE 1103 Science That Matters	1338
	SCIE 1103 Science That Matters-Honors	46
	SCIE 1105 Environmental Science	108
	SCIE 1107 Geographic Information Systems	42
	SCIE 1110 Chemistry of Life	31
	SCIE 1115 Earth and Sky	220
	SCIE 1130 The Science of Disasters	21
	SCIE 1199 Evltn of Ethcs, Asth, Hum Natr	71
	SCIE 1199 ST: Evolution & Hum Nature-Hon	5
	SCIE 1199 ST: Geological Disasters	11
	SCIE 1199 ST: Our Life in the Cosmos	13
	SCIE 1199 ST: The Science of Disasters	48
	SCIE 1210 Science in Heart of Appalachia	121
	SCIE 1220 Geologic Heritage in the Field	74
	SCIE 1221 Evolution and Human Nature	167
	SCIE 1221 Evolution and Human Nature-Honors	69
	SCIE 1230 Student Projects in SPACE	15
Fairmont Total		**3387**
High School Dual Enrollment	SCIE 1100 Human Biology	1
	SCIE 1115 Earth and Sky	104
High School Dual Enrollment Total		**105**

Lewis County	SCIE 1100 Human Biology	19
	SCIE 1115 Earth and Sky	62
Lewis County Total		**81**
Monongalia County	SCIE 1100 Human Biology	117
	SCIE 1103 Science That Matters	205
	SCIE 1115 Earth and Sky	149
Monongalia County Total		**471**
Randolph County	SCIE 1115 Earth and Sky	3
Randolph County Total		**3**
Taylor County	SCIE 1115 Earth and Sky	18
Taylor County Total		**18**
Virtual On-Line Campus	SCIE 1115 Earth and Sky	100
	SCIE 1115 Earth and Sky - Online	48
	SCIE 1120 Intro to Meteorology-Online	696
	SCIE 1199 Oceans, Issues and Society	32
Virtual On-Line Campus Total		**876**
Grand Total		**5461**

Table 8
Rationale for Removal of BIOL 1105/6 Prerequisites

Final grade (F=0, A=4) vs ACT Science reasoning score	Final grade (F=0, A=4) vs ACT Composite score
	

Number of Students passing (A/B/C) vs failing (D/F) plotted as 100% stacked columns for each ACT score.
(Blank = students without an ACT score).

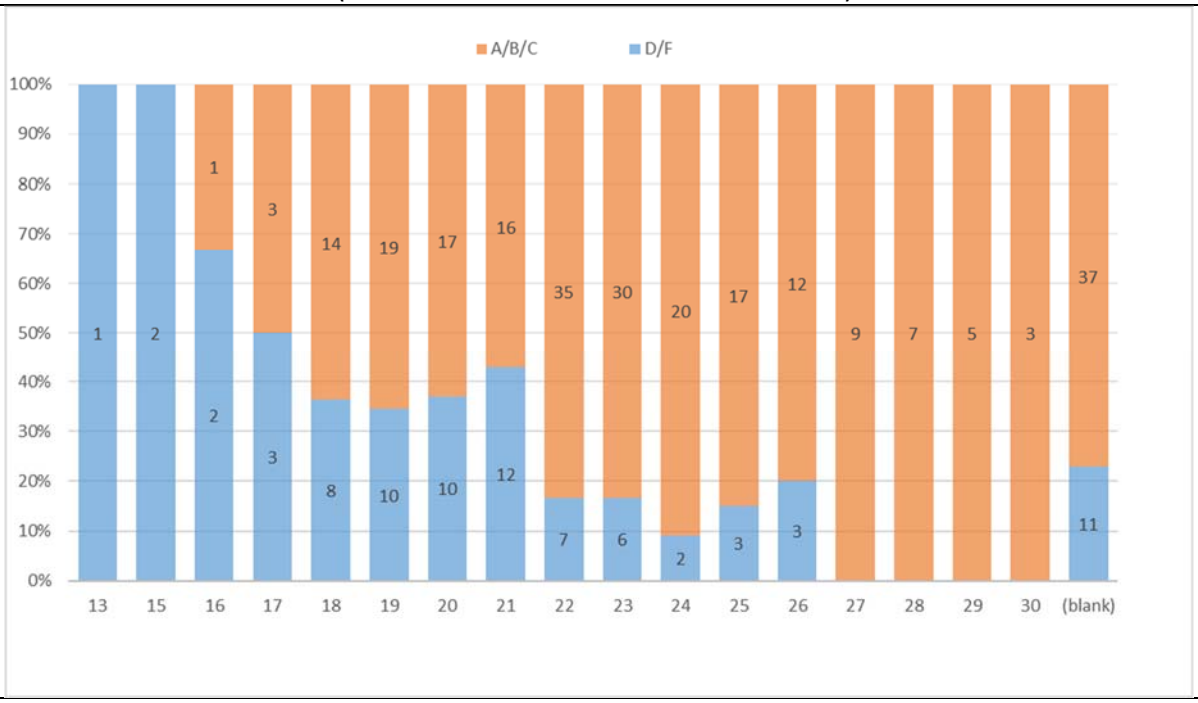


Table 9a
Enrollments in Courses Taught by Full Time and Part Time Faculty
BIOL Course Prefix

EMPLOYEE CLASS	INSTRUCTOR	COURSE	ENROLLMENT
12 Month Faculty Administrator	Trisel, Donald	BIOL 2202 General Botany	45
		BIOL 3312 Advanced Botany I	14
		BIOL 3312 Advanced Botany II	12
		BIOL 3370 Plant Physiology	8
		BIOL 4495 Problems in Biological Sci - Honors	1
		BIOL 4495 Problems in Biological Science	9
		BIOL 4998 Undergraduate Research	7
		BIOL 4998 Undergraduate Research - Honors	3
	Trisel, Donald Total		99
12 Month Faculty Administrator Total			99
9, 10, or 11 Month Faculty	Baur, Andreas	BIOL 3360 Biochemistry	86
	Baur, Andreas Total		86
	Cook, Rachel	BIOL 2202 General Botany	52
		BIOL 3312 Advanced Botany I	12
		BIOL 3370 Plant Physiology	8
		BIOL 3380 Genetics	47
		BIOL 3390 Molecular Biotechnology	42
	Cook, Rachel Total		161
	Flood, Mark	BIOL 1104 Biosphere	68
		BIOL 1104 Biosphere - Honors	14
		BIOL 1105 Biological Principles I	69
		BIOL 1199 ST: Forensic Biology	9
		BIOL 1199 ST: Forensics	1
		BIOL 1199 ST: Intro to Forensic Science	15
		BIOL 3316 Vertebrate Zoology	15
		BIOL 3368 Animal Physiology	49
		BIOL 3380 Genetics	27
		BIOL 4420 Developmental Biology	32
		BIOL 4485 Senior Seminar	50
		BIOL 4485 Senior Seminar-Honors	3
		BIOL 4495 Problems in Biological Sci - Honors	1
		BIOL 4495 Problems in Biological Science	14
		BIOL 4998 Undergraduate Research	2
		BIOL 4998 Undergraduate Research - Honors	4
	Flood, Mark Total		373
	Gilberti, Anthony	BIOL 4998 Undergraduate Research	1
	Gilberti, Anthony Total		1
	Heitzman, Eric	BIOL 2202 General Botany	23
	Heitzman, Eric Total		23
	Huggins, Pamela	BIOL 1105 Biological Principles I	268

		BIOL 1106 Biological Principles II	245
		BIOL 2203 General Zoology	139
		BIOL 3316 Vertebrate Zoology	12
		BIOL 4495 Problems in Biological Sci - Honors	1
		BIOL 4495 Problems in Biological Science	3
	Huggins, Pamela Total		668
	Magro, Albert	BIOL 4495 Problems in Biological Science	7
	Magro, Albert Total		7
	Morris, Tony	BIOL 1180 Human Anatomy & Physiology	88
		BIOL 1180 Human Anatomy & Physiology - Honors	6
		BIOL 1180 Human Anatomy & Physiology - Online	65
		BIOL 1199 ST: Anatomy & Physiology - Online	60
		BIOL 2205 Tech Microbiology	435
		BIOL 2205 Tech Microbiology - Honors	15
		BIOL 2205 Tech Microbiology Lecture	225
		BIOL 2205 Tech Microbiology Lecture - Honors	3
		BIOL 2224 Microbiology	22
	Morris, Tony Total		919
	Roof, Steven	BIOL 1104 Biosphere	142
		BIOL 1104 Biosphere - Honors	3
		BIOL 2224 Microbiology	67
		BIOL 3360 Biochemistry	22
		BIOL 3380 Genetics	93
		BIOL 3390 Molecular Biotechnology	47
		BIOL 4495 Problems in Biological Science	3
		BIOL 4998 Undergraduate Research - Honors	2
	Roof, Steven Total		379
	Yeager, Phillip	BIOL 1105 Biological Principles I	289
		BIOL 1106 Biological Principles II	236
		BIOL 3306 Fundamentals of Ecology	62
		BIOL 3315 Invertebrate Zoology	9
	Yeager, Phillip Total		596
9, 10, or 11 Month Faculty Total			3213
Full Time Classified Salaried	Yarnell, Karen	BIOL 1105 Biological Principles I Lab	88
		BIOL 1106 Biological Principles II Lab	32
		BIOL 2205 Tech Microbiology Lab	83
	Yarnell, Karen Total		203
Full Time Classified Salaried Total			203
Full Time Nonclassified Salary	Shannon, Robynn	BIOL 1105 Biological Principles I Lab	28
Full Time Nonclassified Salary Total			28
PT Faculty	Goydel, Rebecca	BIOL 3360 Biochemistry Lab	10
	Kimball, Jessica	BIOL 1106 Biological Principles II Lab	33
	Martin, Kaitlyn	BIOL 1106 Biological Principles II Lab	17

	Miller, Jamie	BIOL 1105 Biological Principles I Lab	75
		BIOL 1106 Biological Principles II Lab	75
		BIOL 3360 Biochemistry Lab	9
	Miller, Jamie Total		159
	Myers, Seth	BIOL 1105 Biological Principles I Lab	39
PT Faculty Total			258

Table 9b
Enrollments in Courses Taught by Full Time and Part Time Faculty
SCIE Course Prefix

EMPLOYEE CLASS	INSTRUCTOR	COURSE	ENROLLMENT
12 Month Faculty Administrator	Harwell, Sean	SCIE 1199 Oceans, Issues and Society	16
	Harwell, Sean Total		16
	Trisel, Donald	SCIE 1103 Science That Matters	48
		SCIE 1103 Science That Matters-Honors	31
	Trisel, Donald Total		79
12 Month Faculty Administrator Total			**95**
9, 10, or 11 Month Faculty	Baker, J	SCIE 1221 Evolution and Human Nature-Honors	10
	Baker, J Total		10
	Flood, Mark	SCIE 1100 Human Biology	71
	Flood, Mark Total		71
	Gilberti, Anthony	SCIE 1120 Intro to Meteorology-Online	9
	Gilberti, Anthony Total		9
	Hansen, Galen	SCIE 1199 ST: Our Life in the Cosmos	13
		SCIE 1210 Science in Heart of Appalachia	95
		SCIE 1230 Student Projects in SPACE	15
	Hansen, Galen Total		123
	Heitzman, Eric	SCIE 1103 Science That Matters	46
		SCIE 1103 Science That Matters-Honors	15
	Heitzman, Eric Total		61
	Hemler, Debra	SCIE 1199 Oceans, Issues and Society	16
	Huggins, Pamela	SCIE 1100 Human Biology	240
	Magro, Albert	SCIE 1100 Human Biology	114
		SCIE 1110 Chemistry of Life	31
		SCIE 1199 Evltn of Ethcs, Asth, Hum Natr	71
		SCIE 1199 ST: Evolution & Hum Nature-Hon	5
		SCIE 1221 Evolution and Human Nature	167
		SCIE 1221 Evolution and Human Nature-Honors	59
	Magro, Albert Total		447
	Morris, Tony	SCIE 1100 Human Biology	88
	Raol, Marcie	SCIE 1103 Science That Matters	26
	Thompson, Lyvon	SCIE 1103 Science That Matters	144
	Yeager, Phillip	SCIE 1105 Environmental Science	108
		SCIE 1107 Geographic Information Systems	42
	Yeager, Phillip Total		150
9, 10, or 11 Month Faculty Total			**1385**
PT Faculty	Blake, Bascombe	SCIE 1103 Science That Matters	205
		SCIE 1115 Earth and Sky	14
	Broslawsky, James	SCIE 1100 Human Biology	23
	Butcher, Brandon	SCIE 1120 Intro to Meteorology-Online	687
	Byrd, Anita	SCIE 1100 Human Biology	76

	Chapman, James	SCIE 1103 Science That Matters	86
	Cleavenger, Corey	SCIE 1103 Science That Matters	123
	Dodson, Sarah	SCIE 1100 Human Biology	19
	Dunham, Michael	SCIE 1100 Human Biology	117
	Gear, Charles	SCIE 1115 Earth and Sky	3
	Gencheva, Marieta	SCIE 1100 Human Biology	124
	Hamrick, Adam	SCIE 1210 Science in Heart of Appalachia	26
	Hathaway, Anna	SCIE 1100 Human Biology	70
	Kinney, Diane	SCIE 1110 Chemistry of Life	80
		SCIE 1115 Earth and Sky	136
	Ludlow, Ann	SCIE 1100 Human Biology	20
	McDowell, Ronald	SCIE 1130 The Science of Disasters	21
		SCIE 1199 ST: Geological Disasters	11
		SCIE 1199 ST: The Science of Disasters	48
	Meek, Christine	SCIE 1103 Science That Matters	47
	Mellie, Kimberly	SCIE 1103 Science That Matters	165
	Moon, Youyoun	SCIE 1100 Human Biology	182
	Myers, Seth	SCIE 1100 Human Biology	42
		SCIE 1103 Science That Matters	259
	Nugent, Barnes	SCIE 1103 Science That Matters	240
	Pierson, John	SCIE 1100 Human Biology	86
		SCIE 1103 Science That Matters	154
	Romano, Anthony	SCIE 1100 Human Biology	101
	Simard, Claudette	SCIE 1115 Earth and Sky	473
		SCIE 1115 Earth and Sky - Online	48
		SCIE 1220 Geologic Heritage in the Field	74
	Smith, Marc	SCIE 1115 Earth and Sky	166
	Stapleton, Drue	SCIE 1100 Human Biology	15
	Sutton, Pamela	SCIE 1100 Human Biology	40
PT Faculty Total			**3981**
Grand Total			5461

Table 10 Courses Taught by Full Time Faculty – By Term			
Instructor	Term	Course	Enrollment
Cook, Rachel	201610	BIOL 3370 Plant Physiology	8
		BIOL 3370 Plant Physiology Lab	8
		BIOL 3380 Genetics	23
		BIOL 3380 Genetics Lab	23
		BIOL 3380 Genetics Test Lab	23
	201620	BIOL 2202 General Botany	25
		BIOL 2202 General Botany Lab	25
		BIOL 3390 Molecular Biotechnology	24
		BIOL 3390 Molecular Biotechnology Lab	24
	201710	BIOL 1105 Biological Principles I Lab	32
		BIOL 3380 Genetics	24
		BIOL 3380 Genetics Lab	24
		BIOL 3380 Genetics Test Lab	24
	201720	BIOL 2202 General Botany	27
		BIOL 2202 General Botany Lab	27
		BIOL 3390 Molecular Biotechnology	18
		BIOL 3390 Molecular Biotechnology Lab	18
	201730	BIOL 3312 Advanced Botany I	12
Cook, Rachel Total			**389**
Flood, Mark	201310	BIOL 1105 Biological Principles I	69
		BIOL 1105 Biological Principles I Lab	15
		BIOL 1199 ST: Intro to Forensic Science	15
		BIOL 4495 Problems in Biological Science	2
		INTR 4411 Forensic Science Internship	4
	201320	BIOL 1104 Biosphere	17
		BIOL 1104 Biosphere - Honors	2
		BIOL 3368 Animal Physiology	13
		BIOL 3368 Animal Physiology Lab	2
		BIOL 4485 Senior Seminar	9
		BIOL 4495 Problems in Biological Science	1
		INTR 4401 Capstone Sem Forensic Science	3
		INTR 4401 Capstone Sem Forensic Sci-Hon	1
	201330	BIOL 1199 ST: Forensics	1
		SCIE 1100 Human Biology	11
		SCIE 1100 Human Biology Lab	11
	201410	BIOL 3316 Vertebrate Zoology	15
		BIOL 3316 Vertebrate Zoology Lab	15
		BIOL 4495 Problems in Biological Science	3
		FORS 2201 Intro to Forensic Science	10
		FORS 4411 Fnsc Sci Intrn (prv INTR 4411)	4
		SCIE 1100 Human Biology	38
		SCIE 1100 Human Biology Lab	24

	201420	BIOL 4420 Developmental Biology	16
		BIOL 4420 Developmental Biology Lab	16
		BIOL 4485 Senior Seminar	8
		BIOL 4485 Senior Seminar-Honors	2
		BIOL 4495 Problems in Biological Sci - Honors	1
		FORS 4401 Capstone Sem Forensic Science	1
		FORS 4411 Fnsc Sci Intrn(INTR 4411)-Hon	1
		SCIE 1100 Human Biology	22
	201510	BIOL 1199 ST: Forensic Biology	9
		BIOL 1199 ST: Forensic Biology Lab	9
		BIOL 3380 Genetics	27
		BIOL 3380 Genetics Lab	27
		BIOL 3380 Genetics Test Lab	27
		BIOL 4495 Problems in Biological Science	1
		BIOL 4998 Undergraduate Research - Honors	2
	201520	BIOL 1104 Biosphere	17
		BIOL 1104 Biosphere - Honors	7
		BIOL 3368 Animal Physiology	14
		BIOL 3368 Animal Physiology Lab	14
		BIOL 4485 Senior Seminar	12
		BIOL 4485 Senior Seminar-Honors	1
		BIOL 4495 Problems in Biological Science	2
		BIOL 4998 Undergraduate Research	1
		BIOL 4998 Undergraduate Research - Honors	1
		FORS 4401 Capstone Sem Forensic Science	5
	201610	BIOL 4495 Problems in Biological Science	1
		BIOL 4998 Undergraduate Research - Honors	1
		FORS 2201 Intro to Forensic Science	12
		FORS 2201 Intro to Forensic Science Lab	12
		FORS 3201 Forensic Biology	7
		FORS 3201 Forensic Biology Lab	7
		FORS 4411 Fnsc Sci Intrn (prv INTR 4411)	6
	201620	BIOL 1104 Biosphere	17
		BIOL 1104 Biosphere - Honors	2
		BIOL 4420 Developmental Biology	16
		BIOL 4420 Developmental Biology Lab	16
		BIOL 4485 Senior Seminar	8
		BIOL 4495 Problems in Biological Science	2
		BIOL 4998 Undergraduate Research	1
		FORS 3385 Research in Forensic Science	1
		FORS 3385 Research in Forensic Sci-Honor	1
		FORS 4401 Capstone Sem Forensic Science	3
		FORS 4401 Capstone Sem Forensic Sci-Hono	1
	201710	BIOL 3368 Animal Physiology	22
		BIOL 3368 Animal Physiology Lab	22
		BIOL 4495 Problems in Biological Science	1

		FORS 2201 Intro to Forensic Science	8
		FORS 2201 Intro to Forensic Science Lab	8
		FORS 3385 Research in Forensic Science	2
		FORS 4411 Fnsc Sci Intrn (prv INTR 4411)	1
	201720	BIOL 1104 Biosphere	17
		BIOL 1104 Biosphere - Honors	3
		BIOL 4485 Senior Seminar	13
		BIOL 4495 Problems in Biological Science	1
		FORS 3201 Forensic Biology	5
		FORS 3201 Forensic Biology Lab	5
		FORS 4401 Capstone Sem Forensic Science	2
Flood, Mark Total			**752**
Gilberti, Anthony	201310	PHYS 1105 Principles of Physics Test Lab	6
	201320	CHEM 4998 Undergraduate Research	1
		SCIE 1120 Intro to Meteorology-Online	9
	201410	CHEM 4998 Undergraduate Research	0
	201420	BIOL 4998 Undergraduate Research	1
		CHEM 4998 Undergraduate Research	4
		CHEM 4998 Undergraduate Research-Honors	1
Gilberti, Anthony Total			**22**
Heitzman, Eric	201510	BIOL 1105 Biological Principles I Lab	12
		SCIE 1103 Science That Matters	21
		SCIE 1103 Science That Matters-Honors	15
	201520	BIOL 2202 General Botany	23
		BIOL 2202 General Botany Lab	23
		SCIE 1103 Science That Matters	25
Heitzman, Eric Total			**119**
Huggins, Pamela	201310	BIOL 1105 Biological Principles I Lab	32
		BIOL 2203 General Zoology	32
		BIOL 2203 General Zoology Lab	32
		BIOL 4495 Problems in Biological Sci - Honors	1
		SCIE 1100 Human Biology	40
	201320	BIOL 1106 Biological Principles II	45
		BIOL 1106 Biological Principles II Lab	56
		SCIE 1100 Human Biology	45
	201410	BIOL 1105 Biological Principles I	68
		BIOL 1105 Biological Principles I Lab	17
		BIOL 2203 General Zoology	29
		BIOL 2203 General Zoology Lab	29
		BIOL 4495 Problems in Biological Science	1
	201420	BIOL 1106 Biological Principles II	39
		BIOL 1106 Biological Principles II Lab	50
		SCIE 1100 Human Biology	25
	201510	BIOL 1105 Biological Principles I	65
		BIOL 1105 Biological Principles I Lab	14
		BIOL 2203 General Zoology	25

		BIOL 2203 General Zoology Lab	25
	201520	BIOL 1106 Biological Principles II	51
		BIOL 1106 Biological Principles II Lab	31
		BIOL 4495 Problems in Biological Science	0
		SCIE 1100 Human Biology	37
		SCIE 1100 Human Biology Lab	47
	201610	BIOL 1105 Biological Principles I	67
		BIOL 2203 General Zoology	24
		BIOL 2203 General Zoology Lab	22
		BIOL 3316 Vertebrate Zoology	12
		BIOL 3316 Vertebrate Zoology Lab	12
	201620	BIOL 1106 Biological Principles II	54
		BIOL 1106 Biological Principles II Lab	34
		BIOL 4495 Problems in Biological Science	2
		SCIE 1100 Human Biology	48
		SCIE 1100 Human Biology Lab	40
	201710	BIOL 1105 Biological Principles I	68
		BIOL 1105 Biological Principles I Lab	17
		BIOL 2203 General Zoology	29
		BIOL 2203 General Zoology Lab	29
	201720	BIOL 1106 Biological Principles II	56
		BIOL 1106 Biological Principles II Lab	34
		SCIE 1100 Human Biology	45
		SCIE 1100 Human Biology Lab	31
Huggins, Pamela Total			**1460**
Magro, Albert	201310	SCIE 1110 Chemistry of Life	23
		SCIE 1199 Evltn of Ethcs, Asth, Hum Natr	44
	201320	BIOL 4495 Problems in Biological Science	3
		SCIE 1110 Chemistry of Life	8
		SCIE 1199 Evltn of Ethcs, Asth, Hum Natr	27
		SCIE 1199 ST: Evolution & Hum Nature-Hon	5
	201420	BIOL 4495 Problems in Biological Science	2
		SCIE 1221 Evolution and Human Nature	31
		SCIE 1221 Evolution and Human Nature-Honors	10
	201510	SCIE 1221 Evolution and Human Nature	48
	201520	BIOL 4495 Problems in Biological Science	2
		SCIE 1100 Human Biology	39
		SCIE 1221 Evolution and Human Nature	24
		SCIE 1221 Evolution and Human Nature-Honors	9
	201610	BIOL 1105 Biological Principles I Lab	31
		SCIE 1221 Evolution and Human Nature	30
		SCIE 1221 Evolution and Human Nature-Honors	15
	201620	SCIE 1221 Evolution and Human Nature	14
		SCIE 1221 Evolution and Human Nature-Honors	9
	201710	BIOL 1105 Biological Principles I Lab	31
		SCIE 1100 Human Biology	75

		SCIE 1100 Human Biology Lab	24
		SCIE 1221 Evolution and Human Nature	10
		SCIE 1221 Evolution and Human Nature-Honors	16
	201720	BIOL 1106 Biological Principles II Lab	35
		BIOL 1181 Human Anatomy & Physiology Lab	20
		SCIE 1221 Evolution and Human Nature	10
Magro, Albert Total			**595**
Morris, Tony	201310	BIOL 2205 Tech Microbiology	74
		BIOL 2205 Tech Microbiology Lab	75
		SCIE 1100 Human Biology Lab	22
	201320	BIOL 1199 ST: Technical Microbiology Lab	2
		BIOL 2205 Tech Microbiology	82
		BIOL 2205 Tech Microbiology - Honors	3
		BIOL 2205 Tech Microbiology Lab	53
		SCIE 1100 Human Biology Lab	24
	201330	BIOL 1199 ST: Anatomy & Physiology - Online	13
		BIOL 1199 ST: Anatomy & Physiology Lab	7
	201410	BIOL 2205 Tech Microbiology	88
		BIOL 2205 Tech Microbiology Lab	74
	201420	BIOL 2205 Tech Microbiology	88
		BIOL 2205 Tech Microbiology - Honors	6
		BIOL 2205 Tech Microbiology Lab	54
		SCIE 1100 Human Biology Lab	11
	201430	BIOL 1199 ST: Anatomy & Physiology - Online	11
		BIOL 1199 ST: Anatomy & Physiology Lab	20
	201510	BIOL 1199 ST: Anatomy & Physiology - Online	18
		BIOL 1199 ST: Anatomy & Physiology Lab	10
		BIOL 2205 Tech Microbiology	73
		BIOL 2205 Tech Microbiology Lab	73
		BIOL 2205 Tech Microbiology Lecture	34
	201520	BIOL 1199 ST: Technical Microbiology Lab	5
		BIOL 2205 Tech Microbiology	30
		BIOL 2205 Tech Microbiology - Honors	6
		BIOL 2205 Tech Microbiology Lab	24
		BIOL 2224 Microbiology	22
		BIOL 2224 Microbiology Lab	22
	201530	BIOL 1199 ST: Anatomy & Physiology - Online	18
	201610	BIOL 1105 Biological Principles I Lab	14
		BIOL 2205 Tech Microbiology Lecture	66
		BIOL 2206 Tech Microbiology Lab	22
		SCIE 1100 Human Biology	88
		SCIE 1100 Human Biology Lab	15
	201630	BIOL 1180 Human Anatomy & Physiology - Online	33
		BIOL 1181 Human Anatomy & Physiology Lab - Online	30
	201710	BIOL 1105 Biological Principles I Lab	15
		BIOL 1180 Human Anatomy & Physiology	33

		BIOL 1180 Human Anatomy & Physiology - Honors	6
		BIOL 1181 Human Anatomy & Physiology Lab	40
		BIOL 2205 Tech Microbiology Lecture	68
		BIOL 2206 Tech Microbiology Lab	23
	201720	BIOL 1180 Human Anatomy & Physiology	55
		BIOL 1181 Human Anatomy & Physiology Lab	35
		BIOL 2205 Tech Microbiology Lecture	57
		BIOL 2205 Tech Microbiology Lecture - Honors	3
	201730	BIOL 1180 Human Anatomy & Physiology - Online	32
		BIOL 1181 Human Anatomy & Physiology Lab - Online	36
Morris, Tony Total			**1713**
Roof, Steven	201310	BIOL 1104 Biosphere	14
		BIOL 1105 Biological Principles I Lab	16
		BIOL 3380 Genetics	26
		BIOL 3380 Genetics Lab	26
	201320	BIOL 2224 Microbiology	28
		BIOL 2224 Microbiology Lab	28
		BIOL 3360 Biochemistry Lab	7
		BIOL 3390 Molecular Biotechnology	16
		BIOL 3390 Molecular Biotechnology Lab	16
		BIOL 4495 Problems in Biological Science	1
	201410	BIOL 1104 Biosphere	25
		BIOL 1105 Biological Principles I Lab	14
		BIOL 3380 Genetics	20
		BIOL 3380 Genetics Lab	20
		BIOL 4495 Problems in Biological Science	1
		BIOL 4998 Undergraduate Research - Honors	2
	201420	BIOL 1104 Biosphere	24
		BIOL 1104 Biosphere - Honors	3
		BIOL 3360 Biochemistry Lab	12
		BIOL 3390 Molecular Biotechnology	15
		BIOL 3390 Molecular Biotechnology Lab	15
	201510	BIOL 1104 Biosphere	27
		BIOL 1105 Biological Principles I Lab	15
	201520	BIOL 3360 Biochemistry Lab	9
		BIOL 3390 Molecular Biotechnology	16
		BIOL 3390 Molecular Biotechnology Lab	16
	201610	BIOL 1104 Biosphere	27
		BIOL 3380 Genetics	23
		BIOL 3380 Genetics Lab	23
		BIOL 3380 Genetics Test Lab	23
	201620	BIOL 3360 Biochemistry	22
		BIOL 3360 Biochemistry Lab	12
		BIOL 3390 Molecular Biotechnology Lab	24
		BIOL 4495 Problems in Biological Science	1
	201710	BIOL 1104 Biosphere	25

		BIOL 3380 Genetics	24
		BIOL 3380 Genetics Lab	24
		BIOL 3380 Genetics Test Lab	24
	201720	BIOL 2224 Microbiology	39
		BIOL 2224 Microbiology Lab	39
		BIOL 3360 Biochemistry Lab	19
Roof, Steven Total			**761**
Trisel, Donald	201310	BIOL 1105 Biological Principles I Lab	15
		BIOL 3312 Advanced Botany II	12
		BIOL 3312 Advanced Botany II Lab	12
		BIOL 4495 Problems in Biological Science	1
		SCIE 1100 Human Biology Lab	50
		SCIE 1103 Science That Matters-Honors	15
	201320	BIOL 2202 General Botany	22
		BIOL 2202 General Botany Lab	22
		BIOL 4495 Problems in Biological Sci - Honors	1
		BIOL 4495 Problems in Biological Science	1
		BIOL 4998 Undergraduate Research - Honors	0
		SCIE 1103 Science That Matters	24
	201410	BIOL 1105 Biological Principles I Lab	16
		BIOL 3370 Plant Physiology	8
		BIOL 3370 Plant Physiology Lab	8
		BIOL 4495 Problems in Biological Science	3
		BIOL 4998 Undergraduate Research - Honors	2
		SCIE 1100 Human Biology Lab	23
		SCIE 1103 Science That Matters-Honors	16
	201420	BIOL 2202 General Botany	23
		BIOL 2202 General Botany Lab	23
		BIOL 4495 Problems in Biological Science	2
		SCIE 1103 Science That Matters	24
	201510	BIOL 3312 Advanced Botany I	14
		BIOL 3312 Advanced Botany I Lab	14
		BIOL 4495 Problems in Biological Science	2
		BIOL 4998 Undergraduate Research	1
		BIOL 4998 Undergraduate Research - Honors	1
		CHEM 4998 Undergraduate Research	5
	201520	BIOL 4998 Undergraduate Research	4
		CHEM 4998 Undergraduate Research	5
		CHEM 4998 Undergraduate Research-Honors	1
	201610	CHEM 4998 Undergraduate Research	1
	201710	BIOL 4998 Undergraduate Research	1
	201720	BIOL 4998 Undergraduate Research	1
Trisel, Donald Total			**373**
Yeager, Phillip	201310	BIOL 1105 Biological Principles I	69
		BIOL 1105 Biological Principles I Lab	14
		BIOL 3306 Fundamentals of Ecology	8

		BIOL 3306 Fundamentals of Ecology Lab	8
		SCIE 1100 Human Biology Lab	16
	201320	BIOL 1106 Biological Principles II	44
		SCIE 1105 Environmental Science	23
		SCIE 1107 Geographic Information Systems	10
	201410	BIOL 1105 Biological Principles I	59
		BIOL 1105 Biological Principles I Lab	30
		BIOL 3306 Fundamentals of Ecology	13
		BIOL 3306 Fundamentals of Ecology Lab	10
		SCIE 1100 Human Biology Lab	19
	201420	BIOL 1106 Biological Principles II	45
		BIOL 1106 Biological Principles II Lab	17
		SCIE 1100 Human Biology Lab	23
		SCIE 1105 Environmental Science	24
		SCIE 1107 Geographic Information Systems	15
	201510	BIOL 1105 Biological Principles I	48
		BIOL 1105 Biological Principles I Lab	14
		BIOL 3306 Fundamentals of Ecology	14
		BIOL 3306 Fundamentals of Ecology Lab	14
		SCIE 1100 Human Biology Lab	16
	201520	BIOL 1106 Biological Principles II	45
		BIOL 1106 Biological Principles II Lab	32
		SCIE 1105 Environmental Science	22
	201610	BIOL 1105 Biological Principles I	54
		BIOL 1105 Biological Principles I Lab	33
		BIOL 3306 Fundamentals of Ecology	12
		BIOL 3306 Fundamentals of Ecology Lab	12
	201620	BIOL 1106 Biological Principles II	52
		BIOL 1106 Biological Principles II Lab	17
		SCIE 1105 Environmental Science	22
		SCIE 1107 Geographic Information Systems	10
	201710	BIOL 1105 Biological Principles I	59
		BIOL 3306 Fundamentals of Ecology	15
		BIOL 3306 Fundamentals of Ecology Lab	15
		BIOL 3315 Invertebrate Zoology	9
		BIOL 3315 Invertebrate Zoology Lab	9
	201720	BIOL 1106 Biological Principles II	50
		BIOL 1106 Biological Principles II Lab	18
		SCIE 1105 Environmental Science	17
		SCIE 1107 Geographic Information Systems	7
Yeager, Phillip Total			**1063**
Grand Total			7247

Table 11 Program Costs					
Direct Cost per Instructional Credit Hour					
College or School	**2016-17**	**2015-16**	**2014-15**	**2013-14**	**2012-13**
College of Liberal Arts	$94	na	$79	$81	$94
College of Science & Technology	$165	na	$153	$153	$164
School of Business	$147	na	$107	$123	$156
School of Fine Arts	$189	na	$156	$160	$164
School of Education/Health & Human Performance	$232	na	$155	$156	$205
School of Nursing & Allied Health Administration	$221	na	$181	$182	$196
Total Institution	**$150**				
Direct Cost per Student FTE Major					
College or School	**2016-17**	**2015-16**	**2014-15**	**2013-14**	**2012-13**
College of Liberal Arts	$4,703	na	$4,964	$5,030	$4,795
College of Science & Technology	$4,894	na	$5,026	$4,841	$4,946
School of Business	$3,815	na	$4,364	$4,101	$3,867
School of Fine Arts	$19,563	na	$21,710	$17,366	$17,025
School of Education/Health & Human Performance	$4,047	na	$3,487	$3,593	$3,121
School of Nursing & Allied Health Administration	$6,257	na	$5,719	$13,015	$5,993
Total Institution	**$5,038**				

Note: The 2012 - 2015 data was obtained from a program review posted on the webpage of the board of governors; the 2016-17 data was obtained from Andy Raisovich; the 2015-16 data could not be located (no program reviews were posted in 2017).

Table 12a
ETS Biology Major Field Test – Total Score
(Number of Students scoring below, within one standard deviation of, or above the 2016 national average)

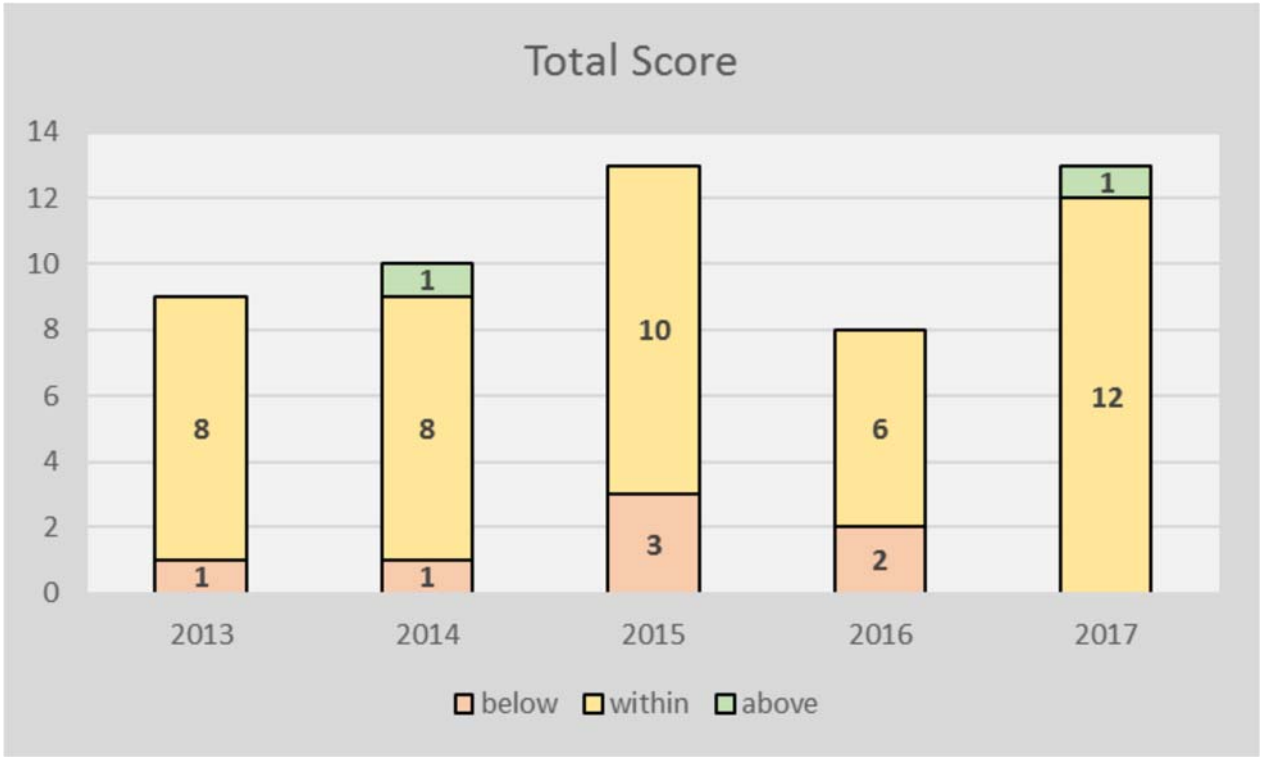
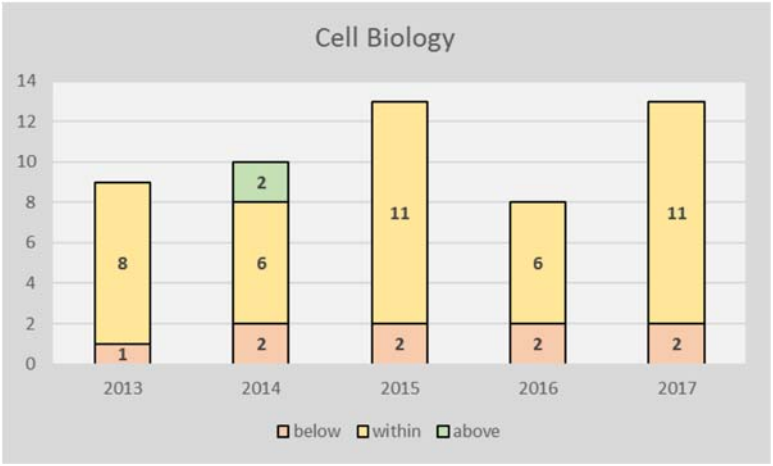
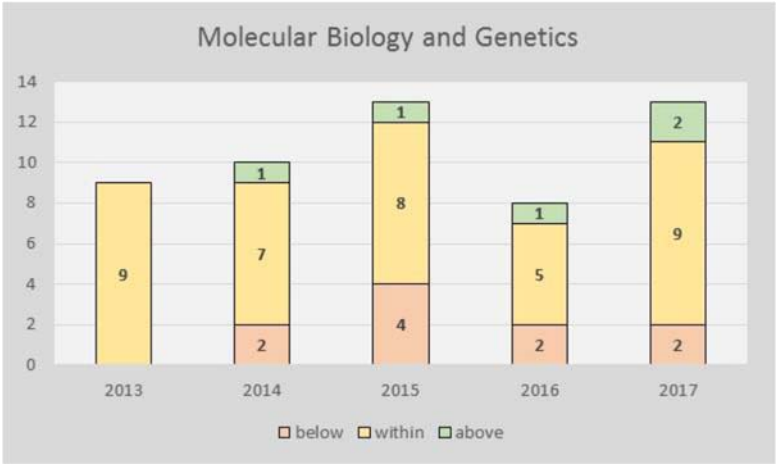


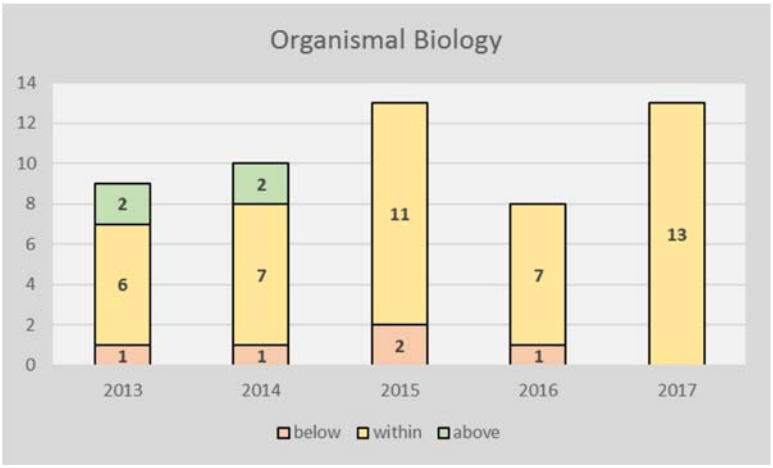
Table 12b

ETS Biology Major Field Test – Sub scores

(Number of Students scoring below, within one standard deviation of, or above the 2016 national average)







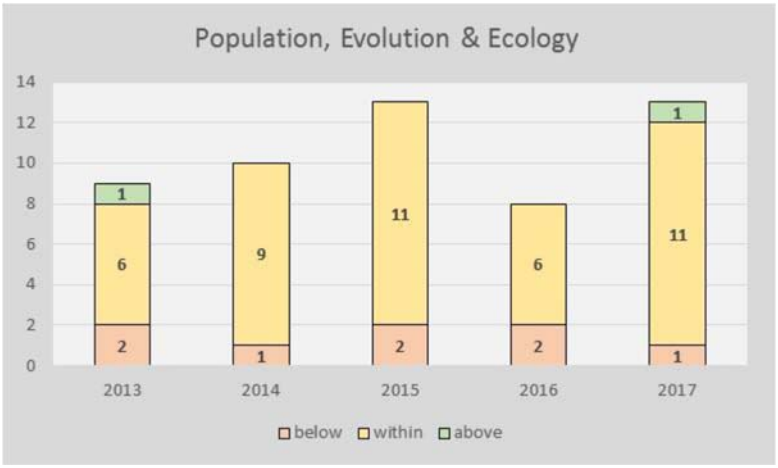


Table 13 Student Lab Report Scores		
	Academic Year	
Course	2015-2016	2016-2017
BIOL 3306 – Fundamentals of Ecology	33% of students scored above 70%	100% of students scored above 70%
BIOL 3368 – Animal Physiology	N/A	75% of students scored above 70% 63% of students scored above 90%
BIOL 3370 – Plant Physiology	82% of students scored above 70%	N/A
BIOL 3390 – Molecular Biotechnology	54% of students scored above 70% Class average= 74%	83% of students scored above 70%

Table 14
Current Biology Curriculum

General Studies Courses (30 credit hours)

Outcome 1 – Critical analysis	ENGL 2220*
Outcome 2 – Quantitative Literacy	MATH 1585 or MATH 2501 (PR for BIOL 3390)
Outcome 3 – Written Communication	ENGL 1101 (Institutional requirement)
Outcome 4 – Teamwork	COMM 2200*
Outcome 5 – Information Literacy	ENGL 1102 (Institutional requirement)
Outcome 6 – Technology Literacy	TECH 1100*
Outcome 7 – Oral Communication	COMM 2200*
Outcome 8 – Citizenship	POLI 1103*
Outcome 9 – Ethics	ENGL 2220*
Outcome 10 – Health	PHED 1100*
Outcome 11 – Interdisciplinary	POLI 1103*
Outcome 12 – Arts	INTR 1120*
Outcome 13 – Humanities	INTR 1120*
Outcome 14 --- Social Sciences	GEOG 2210*
Outcome 15 – Natural Science	CHEM 1105 (PR for CHEM 1106)
Outcome 16 – Cultural Awareness	GEOG 2210*

Any course(s) marked with an asterisk (*) above are recommended to complete the curriculum; however, students may select any other courses from the approved General Studies list.

Biology Courses (51 credit hours)

BIOL 1105 – Biological Principles I
BIOL 1106 – Biological Principles II
BIOL 2202 – General Botany
BIOL 2203 – General Zoology
BIOL 3306 – Fundamentals of Ecology
BIOL 3368 – Animal Physiology
--or—
BIOL 3370 – Plant Physiology
BIOL 3380 – Genetics
BIOL 3390 – Molecular Biotechnology
BIOL 4485 – Senior Seminar
CHEM 1105 – Chemical Principles
CHEM 2200 -- Foundational Biochemistry
CHEM 2201 – Organic Chemistry I
CHEM 2202 – Organic chemistry II

Biology Electives – choose three (12 credit hours)

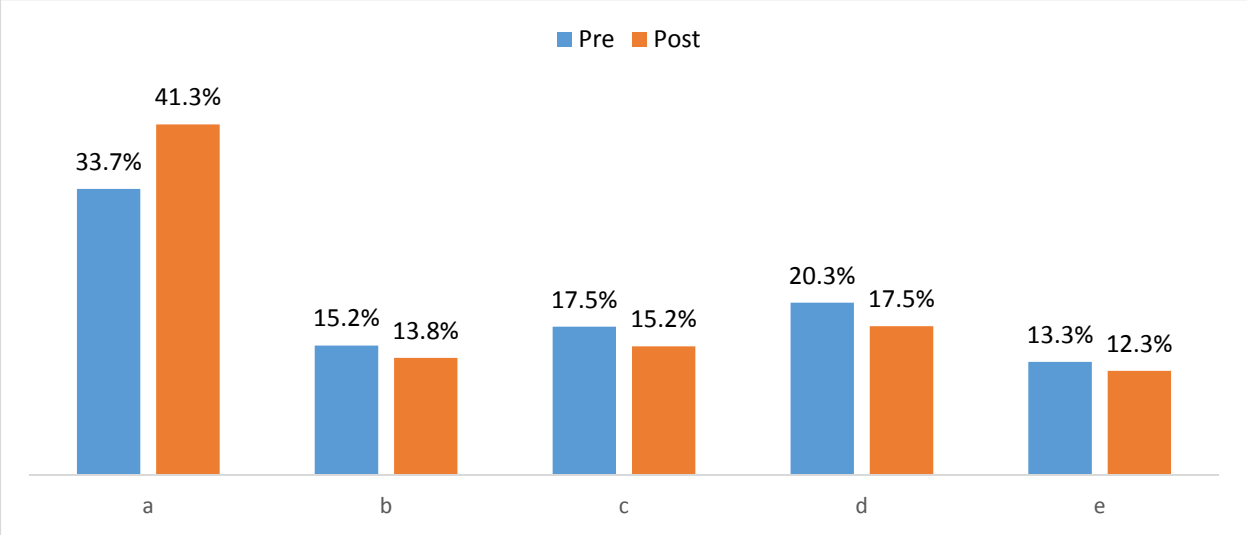
BIOL 2224 – Microbiology
BIOL 3312 – Advanced Botany
BIOL 3315 – Invertebrate Zoology
BIOL 3316 – Vertebrate Zoology
BIOL 3330 – Aquatic Ecology
BIOL 3331 – Terrestrial Ecology
BIOL 3360 – Biochemistry
BIOL 4420 – Developmental Biology

Free Electives (27 credit hours)

Total Credit Hours = 120

Table 15
BIOL 1105 Lab Quiz

For the quiz given prior to the start of the term, the class has a whole answered 33.68% of the questions were correctly. At the end of the term, the class as a whole answered 41.27% of the questions correctly. For this analysis answer 'a' is always the correct answer.



Rachel Cook

414 Hunt Haught Hall, 1201 Locust Avenue, Fairmont State University, Fairmont, WV 26554
(304) 333-3722 rcook11@fairmontstate.edu

Education

May 1999-Aug. 2002	**University of Waterloo**, Waterloo, Ontario, Canada -Doctor of Philosophy in Biology specializing in Plant Taxonomy and Biosystematics
Sept. 1994-Apr.1999	**University of Waterloo**, Waterloo, Ontario, Canada -Honours Co-op Bachelor of Science in Biology

Teaching Positions

Aug 2015- Present	**Temporary Assistant Professor of Biology**, Fairmont State University, Fairmont, West Virginia, USA
May 2013-Aug 2015	**Adjunct Assistant Professor and Sessional Lecturer**, University of Waterloo, Waterloo, Ontario, Canada
Jan. 2009-April 2009	**Contract Academic Staff (CAS) Lecturer,** Wilfrid Laurier University, Waterloo, Ontario, Canada

Research

2017-2018	**Lucas Freeze**
Research Project:	"Determination of appropriate plant species and applicable data analyses for plants grown under hydroponic conditions for implementation in undergraduate plant physiology labs"
2017-2018	**CJ Porter**
Research Project:	"The goldenrods (*Solidago* sp.) of Marion County: including distribution maps and chromosome counts for all local species"
2017	**Joseph Bezjak**
Research Project:	"Analysis of different DNA isolation and PCR amplification protocols for transgenic and organic corn (*Zea mays*) cultivars for implementation in undergraduate molecular biotechnology labs"
2017	**Tyler McKinney**
Research Project:	"Analysis of the growth and photosynthetic rates of plants grown under different light conditions"
2017	**Devin Williams**
Research Project:	"Effects of organic, inorganic and natural fertilizers on the growth and development of corn (*Zea mays*) and tomato (*Lycopersicon esculentum*) species"
2016-2017	**Cortney Bright,**
Research Project:	"Correlation of seed size and planting depth and their effects on germination and seedling survivability"
2015- 2016	**Jephte Leveille**
Research Project:	"The effects of Auxin and Cytokinin concentration on the growth of tobacco callus in tissue culture"

Publications

Semple, J.C., R.E. Cook and E. Owen. 2015. Chromosome number determinations in Fam. Compositae, Tribe Astereae. VIII. Eastern North American taxa. II. Rhodora. 117: 80-91.

Selected Presentations

Cortney Bright, Pamela Huggins and Rachel Cook. "Correlation of seed size and planting depth and their effects on germination and seedling survivability" WV Academy of Sciences, Glenville State College, USA, 08 April 2017. http://pwvas.org/index.php/pwvas/article/view/271

Professional Societies

- Canadian Botanical Association (CBA/ABC)
- Canadian Organic Growers (COG)
- Ecological Farmers of Ontario (EFAO)

Courses Taught at Fairmont State University:

Summer 2017	**BIOL 3312 – Advanced Botany I** (12 students - 1 lab section)
Spring 2016, 2017	**BIOL 2202 – General Botany** (25-27 students - 2 lab sections)
Spring 2016, 2017	**BIOL 3390 – Molecular Biotechnology** (18-24 students – 2 lab sections)
Fall 2015, 2016, 2017	**BIOL 3380 – Genetics** (21-24 students – 2 lab sections)
Fall 2015, 2017	**BIOL 3370 – Plant Physiology** (8-13 students)
Fall 2016	**BIOL 1105 lab – Biological Principals I** (32 students – 2 lab sections)

Mark R. Flood, PhD

Educational Background:

Purdue University	BS	1981-1985	Animal Science
Washington State University	MS	1985-1987	Animal Science
Utah State University	PhD	1987-1992	Embryology
University of Utah	Postdoc	1992-1994	Molecular Biology

Positions and Honors:

Positions and Employment

1987-1988	Teaching Assistant, Washington State University, Pullman, WA
1988-1991	Graduate Research Assistant, Utah State Univ., Logan, UT
1992-1994	Postdoctoral Fellow, University of Utah, Salt Lake City, UT
1994-1997	Assistant Professor, Fairmont State College, Fairmont, WV
1997-2002	Associate Professor, Fairmont State College, Fairmont, WV
2002-present	Professor, Fairmont State University, Fairmont, WV

Other Experience and Professional Membership

1994-present	West Virginia Academy of Sciences (past president)
1997–present	West Virginia Science Teachers Association
2015–present	Mid-Atlantic Association for Forensic Scientists

Honors

2004	Nominated for Boram Excellence in Teaching Award, FSU
2016	Awarded the FSU Excellence in Academic Advising Award

Recent Publication

The Applachian Cardiovascular Research Network (includes numerous authors from FSU). 2012. Identification of Genes Contributing to Cardiovascular Disease in Overweight and Obese Individuals from West Virginia. WV State Medical Journal 108:23- 30.

Selected presentations at scientific meetings by PI and undergraduate students (in bold)– most funded by SURE grants

ANNA CANNONE and MARK FLOOD. 2017 Analysis of CKM (creatine kinase, muscle) polymorphism frequencies. WV Academy of Science Meeting at Glenville State College. Oral presentation.

MEGAN COLLINS and MARK FLOOD. 2017 Analysis of gunshot residue (GSR) transfer to various items. WV Academy of Science Meeting at Glenville State College. Oral presentation.

KAYLA COLEMAN and MARK FLOOD. 2017 An evaluation in the quality of forensic Analysis on blood samples contaminated with chlorinated bleach. WVAS Meeting at Glenville State College. Oral presentation.

BRITTANY SHEPPARD and MARK FLOOD. 2016. Accuracy comparison of different drug test kits using over-the-counter medicines. WV Academy of Science meeting at Marshall University. Oral presentation.

MARLEY SNIDER and MARK FLOOD. 2016. Determining the effects of washing on hair dye extraction. WV Academy of Science meeting at Marshall University. Oral

JACKIE TURNER. 2015. Analysis of GSR particles post firing and post laundering. WV Academy of Science meeting at West Liberty State University. Poster presentation.

JENNIFER CLYMER. 2015. Comparison of round nose and hollow point blood spatter analysis. WV Academy of Science meeting at West Liberty State University. Poster presentation.

DUSTIN SPENCER, ZANE DENNISON, and MARK FLOOD. 2014, Does local Marcellus well drilling impact water quality of nearby streams? WV Academy of Science meeting April 12, 2014 at Shepherd University. Oral presentation

Research Support:

Current Research Support

2018 Spring semester research Experience approx $3,000

- **Makayla Metzger –** Coal Run Stream Rehabilitation

West Virginia EPSCoR Equipment Grant 12/2017-6/2018
This equipment grant helped purchase $20,000 an atomic absorption instrument.
Role: co-PI

Completed Research Support

SURE (Summer Undergraduate Research Experience) – funded by Fairmont State and/or WV NASA Space Grant consortium (These are just the most recent – several others go back as early as 2007)

- Hannah Nelson and Cierra Henderson– 2017
- Jessie Feather, Tyler Groves, and Brittany Sheppard – 2016
- Dannie Arnold, Devin Heitz and Amber Wooten – 2015
- Dustin Spencer, Zane Dennison and Tyler Murphy – 2014
- Jennifer Goggins - 2013
- Lauren Gates and Helen Darcus – 2012
- Seth O'Neal, Christina Snodgrass and Natalie Fox– 2011
- Emily Bosley and Matt Winans - 2010

West Virginia Space Grant Consortium/Fairmont State 10/2013-6/2014
The objective of this course and curriculum proposal was to develop a new Forensic Biology course that is now required within the FSU Forensic Science curriculum. Part of the funding was used to pay for expenses to participate in a Forensic Anthropology training opportunity at the Miami-Dade Forensic Laboratory from May 3-17, 2014.

CURRICULUM VITAE
Pamela Davey Huggins, Ph.D.

CONTACT INFORMATION
Address: 39 Jo Harry Drive, Fairmont WV 26554
Phone: 304-367-4495
Email: Pamela.Huggins@fairmontstate.edu

EDUCATION
Ph.D. 2001 (Coastal Oceanography)
State University of New York at Stony Brook
Doctoral Dissertation: The effect of structural and physiological allometric shifts on reproduction and population growth in the opportunistic polychaete *Capitella* sp. I
Dissertation advisor: Dr. Glenn Lopez

M.S. 1992 (Marine Science)
University of South Carolina
Master's thesis: The effect of microclimate on the distribution of the mussel *Brachidontes exustus*
Thesis advisor: Dr. David Wethey

B.S. 1990 summa cum laude (Marine Biology)
University of New England
Undergraduate advisor: Dr. Steve Zeeman

EMPLOYMENT
Full time employment

Employer	**Position**	**Date**
Fairmont State University	Associate Professor of Biology	2002—present

COURSES TAUGHT
As full time faculty at Fairmont State University
BIOL 1105/1106: Biological Principles I, II
BIOL 1170: Anatomy & Physiology (course relocated to P&TC)
BIOL 2203: General Zoology
BIOL 3306: Fundamentals of Ecology
BIOL 3316: Vertebrate Zoology
BIOL 4485: Senior Seminar
BIOL 4495: Special Topics in Biology
BIOL 4995: Student Research
SCIE 1000: Human Biology *
SCIE 1199: Obesity: A Nation At Risk *
SCIE 1199: Obesity in Appalachia *
SCIE 1199: Global Climate Change *

* New courses designed and taught either alone or in combination with other faculty

AWARDS AND HONORS

- Harold and Roselyn Williamson Straight Award for Faculty Development
- Presidential Lecturer: "The Intelligent Design Debate"

GRANTS

- Fairmont State Faculty Development grant ($2,000)
- SENCER grant ($3,000). Development of Obesity in Appalachia course
- Research for Faculty Development grant ($10,000). Undergraduate summer research project on horseshoe crab population dynamics at the University of Delaware College of Marine and Earth Sciences

RESEARCH

- 2002-2012: Independent student research projects, including analysis of genetic disease in Arab populations and heritability patterns of leopard geckoes.
- 2009: Received a $10,000 Research for Faculty Development grant to conduct undergraduate research on horseshoe crab population dynamics in Delaware Bay.
- 2003: Conducted a summer research project with Dr. Doug Miller at the University of Delaware that investigated the invasive potential of "nuclear worms" (*Namalycastis* sp.)

EDITORIAL REVIEW

- *Journal of Experimental Marine Biology and Ecology*
- *Estuaries*
- *Marine Ecology Progress Series*.
- Belk/Borden, *Biology: Science for Life*. Chapters 1-3.
- Withgott/Brennan *Environment: The Science behind the Stories*, 2e. Chapter 5.

PROFESSIONAL MEMBERSHIPS

- West Virginia Academy of Sciences
- National Association of Biology Teachers

SELECTED PRESENTATIONS AND INVITED LECTURES

- "The Intelligent Design Debate." Presidential Lecture
- "The Biology of Being Female." Invited guest lecture, Fairmont State
- "Is Jamie Lee Curtis a Man? Sex and Gender: Biology or Fashion?" Women's Studies Colloquium joint presentation with Dr. Frances E. Davey
- "Nuclear Worms: Great Bait—Or Alien Invasion?" Invited guest lecture at Davis & Elkins College
- "How to Get Into Graduate School-and How to Survive Long Enough to Get Out"
- "Sea Monsters! The Mythology and Natural History of the Ocean's Most Frightening Inhabitants." Fairmont State and invited guest lecture at Fairmont Senior High School and North Marion High School
- A Celebration of the Book: Wendell Berry's *In the Presence of Fear*

CURRICULUM VITAE

NAME: **MORRIS, TONY EDWARD, Ph.D.**

BUSINESS ADDRESS: 419 Hunt Haught Hall
Department of Biology, Chemistry and Geoscience
College of Science and Technology
Fairmont State University
1201 Locust Ave.
Fairmont, WV 26554

TELEPHONE: **(**304) 367-4493 (work), (304) 366-4344 (home)

BIRTH DATE: December 5, 1960
BIRTHPLACE: Parkersburg, West Virginia
CITIZENSHIP: United States
MARITAL STATUS: Married

PRESENT POSITION: Professor of Biology
College of Science and Technology
Fairmont State University
Fairmont, WV 1994-present

ACADEMIC DEGREES: Ph.D., Microbiology, Clemson University, Clemson, South Carolina, 1989

B.S., *summa cum laude*, Science Education, Bob Jones University, Greenville, South Carolina, 1983

RESEARCH AND PROFESSIONAL EXPERIENCE:

Professor of Biology, College of Science and Technology, Fairmont State University, Fairmont, WV. 1994-present. Tenure granted 2001.

Postdoctoral Fellow, Division of Cardiology, Department of Medicine, Oregon Health Sciences University, Portland Oregon. 1990 -1994.

Graduate Assistant, Department of Microbiology, Clemson University, Clemson, South Carolina. 1986 - 1989.

Educator, Southside Christian High School, Greenville, South Carolina. 1983 - 1985.

COURSE TAUGHT AT FAIRMONT STATE COLLEGE/UNIVERSITY:

Biology 1170	Anatomy and Physiology
Biology 2205	Technical Microbiology
Biology 1105	Biological Principles I
Biology 1106	Biological Principles II
Biology 3360	Biochemistry
Biology 1199	Biochemical Techniques
Biology 3328	Genetics
Biology 3310	Cell Biology
Biology 1101	Introduction to Biology
Biology 1102	Biology of Organisms
Science 1199	Science That Matters
Biology 1199	Introduction to Immunology

Steven K. Roof

328b Hunt Haught Hall, 1201 Locust Avenue, Fairmont State University, Fairmont, WV 26554
(304) 367-4363 Steven.Roof@fairmontstate.edu

Education:

- Washington State University, Pullman, WA; *Doctor of Philosophy,* Aug 1986 – May 1992
- Kansas State University, Manhattan, KS; *Bachelor of Science,* Aug 1977 – May 1982

Teaching Positions:

- Fairmont State University, Professor, 2004 – present
- Fairmont State University, Associate Professor 1997 – 2004
- Fairmont State University, Assistant Professor 1994 – 1997
- Washington State University, Teaching Assistant, 1986 – 1992

Administrative Positions:

- Chair, Department of Biology Chemistry and Geoscience (Now Department of Natural Sciences), 2015 – Present

Research:

- Numerous projects with undergraduates – see presentations section.

Grants and Awards:

Publications:

Presentations:

- Student Presentations at the 2017 annual meeting of the West Virginia Academy of Science.
    - Holly Blankenship: Effects of ethanol treatment time on bacterial recovery.
    - Joshua Bombard: The Five Second Rule.
    - Matthew Hunter: Analysis of disinfectant wipe effectiveness – an introductory microbiology lab?
    - Johnna Lopez: Investigating chicken bacterial cell density and serial dilutions: An educational approach
    - Jessica Dellagatta: Expanding the traditional Microbiology Disk Diffusion Lab

- Student Presentations at the 2014 annual meeting of the West Virginia Academy of Science.
    - Emily Grant: Osmosis investigations for elementary education majors.
    - Matt Greathouse: Exolabs high resolution iPad camera in the biology laboratory.
    - Kaitlyn Martin and Stephanie Remias: Bacterial inhibition of extracts from *Allium sativum, Juglans nigra, Liriodendron tulipifera,* and *Echinacea purpurea*
    - Stephanie Remias and Kaitlyn Martin: Antimicrobial effect of fresh and dried *Juglans nigra* extracts against *Staphylococcus epidermidis*.

- Student presentations at Fairmont State Celebration of Student Scholarship, April 2014
    - Courtney Swiger: Who eats Whom? A mini-ecosystem lab for introductory biology class.

- Student Presentations at the 2013 annual meeting of the West Virginia Academy of Science.
    - Samanatha Bolyard, John Lowther: The effectiveness of natural products on the inhibition of bacterial growth in nutrient broth.
    - Kala Durham: Determining the sanitizing capability of the Steri-Pod™
    - Samanatha Bolyard*, Lindsey Dodrill: The effectiveness of plant extracts on the inhibition of bacterial growth.

Professional Affiliations:

- American Society for Microbiology
- National Association of Biology Teachers
- West Virginia Academy of Science

Courses Taught Fall 2012- Spring 2017

- See Summary Table

Phil Yeager

404 Hunt Haught Hall, 1201 Locust Avenue, Fairmont State University, Fairmont, WV 26554

(304) 367-4186 pyeager@fairmontstate.edu

Education

- University of North Texas, Denton, Texas, 1995, Doctor of Philosophy, Ecology
- University of Wyoming, Laramie, Wyoming, 1988, Master of Science, Aquatic Entomology and Toxicology
- University of Northern Colorado, Greeley, Colorado, 1982, Bachelor of Arts, Zoology,

Teaching Positions

- Fairmont State University, 1999 – present
- University of Toledo, 1994 – 1999

Research

- Tree Location, descriptions and GIS map with data. John Pearson, 2008.
- Location of Wind Farms in West Virginal as Predicted using GIS information. James Conrad, 2009.
- Measuring the Effectiveness of Acid Mine Drainage Remediation in Tributaries of Three Forks Creek. Emily Bosely, 2009.
- Measuring the Effectiveness of Acid Mine Drainage Remediation in Tributaries of Three Forks Creek Using Microbial Community Function. Natalie Fox, 2011.
- Sediment Loading and Microbial Community Function in the West Fork River of West Virginia. Justin Hilliard, 2012

Grants Awarded

- NASA Research Grant 2010-2012
- SURE Grant 2010 -2012

Publications

Selected Presentations

- Tree Location, descriptions and GIS map with data. John Pearson, 2008, Celebration of Student Scholarship
- Location of Wind Farms in West Virginal as Predicted using GIS information. James Conrad, 2009. Celebration of Student Scholarship, West Virginian Academy of Science
- Measuring the Effectiveness of Acid Mine Drainage Remediation in Tributaries of Three Forks Creek. Emily Bosely, 2009 . Celebration of Student Scholarship, West Virginian Academy of Science

- Measuring the Effectiveness of Acid Mine Drainage Remediation in Tributaries of Three Forks Creek Using Microbial Community Function. Natalie Fox, West Virginia Academy of Science, 2012**.**

Professional Societies

- West Virginia Academy of Science
- North American Benthological Society
- West Virginia Association of Geographic Professionals

Courses Taught

- Non Biology Courses
    - SCIE
        - Human Biology, SCIE 1100
        - Environmental Science, SCIE 1105
        - Geographic Information Systems, SCIE 1107
- Biology Courses, See summary table