## **APPENDIX B (from proposed AS BIO)**

Articulated Pathways for an Associate of Science in Biology to Six Transfer-Universities

George Mason University (see last page for advising sheet – consistent with

Advance/ AS Science and agreed to with Mason)

Start with Precalculus				Start with Calculus		
1st Semester		Cr	1st Semester			
SDV	100 College Success Skills or SDV 101	1	SDV	100 College Success Skills or SDV 101	1	
ENG	111College Composition 1	3	ENG	111College Composition 1	3	
<sup>1</sup> MTH	161 Pre-Calculus 1	3	MTH	263 Calculus with Analytic Geometry I	4	
CHM	111 General Chemistry I w/Lab	4	CHM	111 General Chemistry I w/Lab	3	
	Social Science Elective #1 (HIS 101 or 102)	3		Social Science Elective #1 (HIS 101 or 102)	3	
	Total	14		Total	15	
2 <sup>nd</sup> Semester			2 <sup>nd</sup> Sen	emester		
ENG	112 College Composition II	3	ENG	112 College Composition II	3	
$^{2}MTH$	162 Pre-Calculus II	3	<sup>1</sup> MTH	264 Calculus with Analytic	4	
			1	Geo <mark>m</mark> etry II		
CHM	112 General Chemistry II w/Lab	4	CHM	112 General Chemistry II w/Lab	4	
3BIO	110 General Botany w/Lab	4	3BIO	110 Genera <mark>l Botan</mark> y w/Lab	4	
	Total	14		Total	15	
3 <sup>rd</sup> Semester			3 <sup>rd</sup> Semester			
3rd Sem	ester		3 <sup>rd</sup> Sem	nester		
		4			3	
MTH	263 Calculus with Analytic Geometry I	4	MTH	MTH 245 Statistics	3	
MTH	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1	3	MTH 4	MTH 245 Statistics  Humanities/Fine Arts Elective #1	3	
MTH  4  3BIO	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab	3 4	MTH  4  3BIO	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab	3 4	
MTH  4  3BIO  5	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2	3 4 3	MTH  4  3BIO  5	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2	3 4 3	
MTH  4  3BIO	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking	3 4	MTH  4  3BIO	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public	3 4	
MTH  4  3BIO  5	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2	3 4 3	MTH  4  3BIO  5	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to	3 4 3	
MTH  4  3BIO  5	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking	3 4 3	MTH  4  3BIO  5	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public	3 4 3	
MTH  4  3BIO  5  CST  Total  4th Semi	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	3 4 3 3	MTH  4  3BIO  5  CST  Total  4th Sem	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	3 4 3 3	
MTH  4  3BIO  5  CST	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	3 4 3 3 17	MTH  4  3BIO  5  CST  Total  4th Sem BIO	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	3 4 3 3 16	
MTH  4  3BIO  5  CST  Total  4th Semi	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester 206 Cell Biology w/Lab MTH 245 Statistics	3 4 3 3 17	MTH  4  3BIO  5  CST  Total  4th Sem  BIO PHY	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab	3 4 3 3 16	
MTH  4  3BIO  5  CST  Total  4th Semi	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester 206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2	3 4 3 3 17	MTH  4  3BIO  5  CST  Total  4th Sem  BIO  PHY  5	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2	3 4 3 3 16	
MTH  4  3BIO  5  CST  Total  4th Semonth Sem	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2 Social Science Elective #3	3 4 3 3 17 4 3 3 3	MTH  4  3BIO  5  CST  Total  4th Sem  BIO PHY  5  2	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2 Social Science Elective #3	3 4 3 3 16	
MTH  4  3BIO  5  CST  Total  4th Semi	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2 Social Science Elective #3 101 or 102 History of Western	3 4 3 3 17	MTH  4  3BIO  5  CST  Total  4th Sem  BIO  PHY  5	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester  206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2 Social Science Elective #3 101 or 102 History of Western	3 4 3 3 16	
MTH  4  3BIO  5  CST  Total  4th Semonth Sem	263 Calculus with Analytic Geometry I Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2 Social Science Elective #3	3 4 3 3 17 4 3 3 3	MTH  4  3BIO  5  CST  Total  4th Sem  BIO PHY  5  2	MTH 245 Statistics  Humanities/Fine Arts Elective #1 120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2 Social Science Elective #3	3 4 3 3 16	

## NOTES for transferring AS Biology to George Mason Universisty

For students starting with Pre-Calculus, see all notes. For students starting with Calculus, see notes 3 through 6.

1 & 2. College Ready students starting the AS in Biology degree who test into Precalculus

can begin with MTH 161 Precalculus I (3 credits) in first semester then take MTH 162 Precalculus II (3 credits in the second semester. These courses are prerequisite for MTH 263 Calculus with Analytic Geometry I (4 credits)

A well prepared student may elect to take the faster paced, MTH 167 Precalculus (4 credits) in the first semester, then MTH 263 Calculus with Analytic Geometry I (4 credits) in their 2<sup>nd</sup> semester.

- 3. Students may take either BIO 110 General Botany, (4 credits) BIO 120 General Zoology (4 credits) first. Or students may take BIO 101, followed by BIO 102, which will provide a broader range of transfer to other universities. At GMU two courses completed, BIO 110 and BIO 120, transfers as a 4 credit BIOL 300 (Biodiversity at Mason), and 4 elective BIOL credits.
- 4. Humanities Electives #1 and #2, select from these transferrable courses:

ART 101 History and Appreciation of Art I

ART 102 History and Appreciation of Art II

MUS 121 Music Appreciation

**REL 231 World Religions** 

5. Social Science Elective #2 and #3, select from these transferrable courses:

ECO 201 Principles of Macroeconomics

HIS 121 US History I

PLS 140 Intro to Comparative Politics

**PSY Introduction to Psychology** 

SOC Introduction to Sociology



Students may start an AS Science (soon to be AS Bio 2020, hopefully) with either precalculus or calculus.

Students who start NOVA in developmental math should take MTH 161 with MCR (corequisite) as SOON AS POSSIBLE to promote degree completion.

1 <sup>st</sup> Seme	th Precalculus ester	Cr	Start with Calculus 1st Semester			
SDV	100 College Success Skills or SDV 101	1	SDV	100 College Success Skills or SDV 101	1	
ENG	111College Composition 1	3	ENG	111College Composition 1	3	
<sup>1</sup> MTH	161 Pre-Calculus 1	3	MTH	263 Calculus with Analytic Geometry I	4	
CHM	111 General Chemistry I w/Lab	4	CHM	111 General Chemistry I w/Lab	3	
	Social Science Elective #1 (HIS 101 or 102)	3		Social Science Elective #1 (HIS 101 or 102)	3	
	Total	14		Total	15	
2 <sup>nd</sup> Semester			2 <sup>nd</sup> Sen			
ENG	112 College Composition II	3	ENG	112 College Composition II	3	
<sup>2</sup> MTH	162 Pre-Calculus II	3	<sup>1</sup> MTH	264 Calculus with Analytic Geometry II	4	
CHM	112 General Chemistry II w/Lab	4	CHM	112 General Chemistry II w/Lab	4	
3BIO	110 General Botany w/Lab	4	3BIO	110 General Botany w/Lab	4	
	Total	14		Total	15	
3 <sup>rd</sup> Semester			3 <sup>rd</sup> Semester			
MTH	263 Calculus with Analytic Geometry I	4	MTH	MTH 245 Statistics	3	
		_	1	Humanities/Fine Arts Elective #1	3	
4	Humanities/Fine Arts Elective #1	3	4	Transaction Transaction	•	
<sup>4</sup> <sup>3</sup> BIO	Humanities/Fine Arts Elective #1 120 General Zoology w/Lab	3 4	3BIO	120 General Zoology w/Lab	4	
<sup>3</sup> BIO <sub>5</sub>	120 General Zoology w/Lab Social Science Elective #2	4 3	<sup>3</sup> BIO <sub>5</sub>	120 General Zoology w/Lab Social Science Elective #2	4 3	
3BIO	120 General Zoology w/Lab	4	3BIO	120 General Zoology w/Lab	4	
<sup>3</sup> BIO <sub>5</sub>	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking	4 3	<sup>3</sup> BIO <sub>5</sub>	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to	4 3	
<sup>3</sup> BIO <sup>5</sup> CST Total 4 <sup>th</sup> Seme	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	4 3 3	<sup>3</sup> BIO <sup>5</sup> CST Total 4 <sup>th</sup> Sem	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications	4 3 3	
<sup>3</sup> BIO <sup>5</sup> CST Total <u>4<sup>th</sup> Seme</u> BIO	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester 206 Cell Biology w/Lab	4 3 3 17	3BIO 5 CST  Total  4th Sem BIO	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab	4 3 3 16	
3BIO 5 CST  Total  4th Semo	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester 206 Cell Biology w/Lab MTH 245 Statistics	4 3 3 17 4 3	3BIO 5 CST  Total  4th Sem BIO PHY	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab	4 3 3 16	
<sup>3</sup> BIO <sup>5</sup> CST Total 4 <sup>th</sup> Seme BIO MTH <sup>5</sup>	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2	4 3 3 17 4 3 3	3BIO 5  CST  Total  4th Sem BIO PHY 5	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2	4 3 3 16 4 4 3	
<sup>3</sup> BIO <sup>5</sup> CST Total <u>4<sup>th</sup> Seme</u> BIO MTH <sup>5</sup>	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2 Social Science Elective #3	4 3 3 17 4 3 3 3	<sup>3</sup> BIO <sup>5</sup> CST  Total  4 <sup>th</sup> Sem BIO PHY 5 2	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester  206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2 Social Science Elective #3	4 3 3 16 4 4 3 3	
<sup>3</sup> BIO <sup>5</sup> CST Total 4 <sup>th</sup> Seme BIO MTH <sup>5</sup>	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  ester  206 Cell Biology w/Lab MTH 245 Statistics Humanities/Fine Arts Elective #2	4 3 3 17 4 3 3	3BIO 5  CST  Total  4th Sem BIO PHY 5	120 General Zoology w/Lab Social Science Elective #2 100 Principles of Public Speaking or 110 Intro. to Communications  nester 206 Cell Biology w/Lab 201 College Physics I w/Lab Humanities/Fine Arts Elective #2	4 3 3 16 4 4 3	