

# Biology Bachelor of Science Major/Pre-Professional Secondary Education Minor Suggested Academic Plan

Use the Biology Endorsement Requirements Checklist on the MSME Website for more information and guidance on course selection.

Year 1	Fall	Cr.	Spring	Cr.	Summer	Cr.
<i>Students must complete all Madison Foundations courses by end of first year.</i>	BIO 140 (C3NS)	3	BIO 150 (BS Scientific Literacy)	3	*Take ALEKS/Praxis Core Math	
	BIO 140L (C3L)	1	BIO 150L	1	*Complete CPR/First Aid/AED	
	WRTC 103 (C1W)	3	CHEM 132	3		
	CHEM 131 (C3PP)	3	CHEM 132L	1		
	CHEM 131L	1	C1CT	3		
	C1HC	3	MATH Statistics (C3QR)	3		
	*Attend TE meeting in November.					
	<b>Total Credits</b>	14	<b>Total Credits</b>	14	<b>Total Credits</b>	
Year 2	Fall	Cr.	Spring	Cr.	Summer	Cr.
	BIO 240 or BIO 250 (recommended)	3	BIO 240 or BIO 250	3		
	BIO 240L or BIO 250L	1	BIO 240L or BIO 250L	1		
	EDUC 200	3	C2VPA	3		
	CHEM 241	3	C5WD	3		
	MATH #2 (BS Quant. Reas.)	3	C4AE	4		
	PSYC 160 (C5SD)	3	MSSE 101	1		
			*Be admitted to TE by 3/1			
	<b>Total Credits</b>	16	<b>Total Credits</b>	15	<b>Total Credits</b>	
Year 3	Fall	Cr.	Spring	Cr.	Summer	Cr.
<i>Enrollment in MSSE 370 and MSSE 371 requires admission to the Teacher Education Program and must be completed no later than spring of junior year.</i>	PHYS 125	3	BIO elect. (organismal diversity/botany)	3		
	PHYS 125L	1	BIO elective w/lab	4		
	MSSE 210	3	<b>MSSE 370</b>	3		
	C4GE	3	<b>MSSE 371</b>	1		
	CHEM/GEOL 355 (fall only; Earth Sci. req.; see note below)	3	BIO elective	4		
	BIO elective	3				
	<b>Total Credits</b>	16	<b>Total Credits</b>	15	<b>Total Credits</b>	
Year 4	Fall	Cr.	Spring	Cr.	Summer - GRAD	Cr.
<i>MSSE 370, MSSE 371, and MSSE 210, must be completed before enrolling in MSSE 414, MSSE 415, and LED 440. Apply to The Graduate School by April 1 of senior year.</i>	<b>MSSE 414 (fall only)</b>	3	BIO elective (anatomy/physiology)	3	<b>EDUC 540 (spring/summer)</b>	3
	<b>MSSE 415</b>	3	C2HQC	3	<b>EXED 512 (spring/summer)</b>	3
	LED 440	3	Elective	3	<b>MSSE 607 (summer/fall)</b>	3
	C2L	3	BIO elect. w/lab (org. diversity/zoology)	4	<b>MSSE 625 (spring/summer)</b>	3
	BIO elective	3	Elective	3		
	*Attend Student Teaching meeting.		*Graduate undergrad.		*Passing score on Praxis SA required by August 15.	
	*Apply to graduate undergrad		*Attempt Praxis SA by 3/1.			
	<b>Total Credits</b>	15	<b>Total Credits</b>	16	<b>Total Credits</b>	12

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Year 5	Fall - GRAD	Cr.	Spring - GRAD	Cr.	Summer	Cr.
	<b>MSSE 544 (fall only)</b>	3	<b>MSSE 650</b>	3	<i>*Apply for Teaching License</i>	
	<b>MSSE 549 (fall only)</b>	3	<b>MSSE 675 #1 (student teaching)</b>	3		
	<b>MSSE 620 (spring/fall)</b>	3	<b>MSSE 675 #2 (student teaching)</b>	3		
	<b>MSSE 630 (fall only)</b>	3				
	<i>*Apply to graduate Graduate School</i>		<i>*graduate from Graduate School</i>			
	<b>Total Credits</b>	12	<b>Total Credits</b>	9	<b>Total Credits</b>	

### Notes:

- The General Education area codes (C3PP, C2L, etc.) are used in this plan to minimize text. Please reference the General Education Planner found on the General Education website ([www.jmu.edu/gened](http://www.jmu.edu/gened)) for more information.
- Bolded classes should stay in the semester in which they are planned due to pre-requisites, co-requisites, or the term the course is offered. Talk with your Pre-professional Secondary Education minor advisor if you think you need or would like to take a bolded course in a different semester.
- Prospective Biology teachers need a course in Earth Science/Geology. There are several courses that could be used to satisfy this requirement. Some courses are cross-listed Chemistry/Geology. Some courses are cross-listed Biology/Geology. This specific suggested academic plan satisfies the Earth Science requirement with CHEM/GEOL 355 which satisfies the second organic chemistry requirement as well as the Earth Science requirement. Consult with your Biology major advisor about the best course of action for you to complete the Earth Science requirement in a way that makes sense for your coursework and interests.

*This document is provided as an advising resource only. Official curriculum requirements are listed in the JMU Undergraduate Catalog and the JMU Graduate Catalog. In the case of discrepancies, the University Catalog is the official curriculum students must follow. This document was reviewed by the Middle, Secondary, and Mathematics Education Academic Unit Head on June 1, 2024.*