

## Sample Program for Biology Major

Freshman Fall	CREDITS	Freshman Spring	CREDITS
CHEM 120 – General Chemistry I	4	CHEM 121 – General Chemistry II	4
BIOL 160 – General Biology I	4	BIOL 161 – General Biology II	4
MATH 220 – Calculus I	4	MATH 230 – Statistics (or MATH 130)	3–4
ENGL 103* – Composition and Argument	3	ENGL 104* – Composition and Literature	3
BIOL 112 – Science Success	1	VUSM 100 – Franciscan Values and Traditions	3
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>17–18</b>
Sophomore Fall		Sophomore Spring	
BIOL 250** – Molecular and Cell. Basis of Life	4	BIOL 251 – Ecology and Evolution	4
CHEM 240 – Organic Chemistry I	4	CHEM 340 – Organic Chemistry II	4
ECON 102 – Microeconomics (or approved econ)	3	Scientific Reasoning: Social Sciences	3
VUSM 200 – Living in a Diverse World	3	Historical Analysis	3
PHYS 250 – Physics I (or PHYS 160)	3	Artistic Awareness	3
PHYS 270 – Physics I Lab	1		
<b>Total</b>	<b>18</b>	<b>Total</b>	<b>17</b>
Junior Fall		Junior Spring	
ENGL – Literary Analysis	3	BIOL 430 – Mol. Genetics (or approved elective)	4
BIOL 370 – Biochemistry (or approved elective)	4	BIOL 3/4XX – BIOL elective (BIOL 340)	4
BIOL 397 – Introduction to Research	3	Philosophical and Moral Inquiry	3
Integrating Faith and Practice	3	Theological Inquiry	3
VUSM 300 – Serving the Common Good	3	VUSM 400 – The Ethical Life	3
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>17</b>
<b>Total VU credits 101–102</b>			

Courses required for admission to the MCW School of Pharmacy are highlighted in red.

\*ENGL 105 or 195 can be substituted

\*\*BIOL 250 can be substituted for MCW's required oral communication course

This assumes reverse transfer of 19 total credits from the School of Pharmacy to fulfill the requirements for a bachelor of science degree (120 total credits) with a major in biology as follows:

MCW Year 1 PharmD Course	VU Reverse Transfer Course	Credits Toward B.S.
512 – Clinical Human Anatomy with Lab	BIOL 482 – Human Anatomy	4
513 – Human Physiology	BIOL 347 – Human Physiology	4
510 – Clinical Immunology	BIOL 426 – Immunology	4
560 – Microbiology	BIOL 376 – Microbiology	4
541-4 – Intro. Pharmacy Practice Exp.	BIOL 498 & 499 – Research Strategies	3
	<b>Total</b>	<b>19</b>

## Sample Program for Biochemistry Major

Freshman Fall	CREDITS	Freshman Spring	CREDITS
CHEM 120 – General Chemistry I	4	CHEM 121 – General Chemistry II	4
BIOL 160 – General Biology I	4	BIOL 161 – General Biology II	4
MATH 220 – Calculus I	4	MATH 230 – Statistics	4
ENGL 103* – Composition and Argument	3	ENGL 104* – Composition and Literature	3
CHEM 112 – Science Success	1	VUSM 100 – Franciscan Values and Traditions	3
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>18</b>
Sophomore Fall		Sophomore Spring	
BIOL 250** – Molecular and Cellular Basis of Life	4	CHEM 340 – Organic Chemistry II	4
CHEM 240 – Organic Chemistry I	4	PHYS 261 – Physics II	3
ECON 102 – Microeconomics (or approved econ)	3	PHYS 271 – Physics II lab	1
PHYS 260 – Physics I	3	Scientific Reasoning: Social Sciences	3
PHYS 270 – Physics I Lab	1	Historical Analysis	3
VUSM 200 – Living in a Diverse World	3	Artistic Awareness	
<b>Total</b>	<b>18</b>	<b>Total</b>	<b>17</b>
Junior Fall		Junior Spring	
ENGL – Literary Analysis	3	CHEM 475 – Advanced Biochemistry	4
BIOL 370 – Biochemistry	4	Integrating Faith and Practice	3
CHEM 397 – Introduction to Research	3	Philosophical and Moral Inquiry	3
VUSM 300 – Serving the Common Good	3	Theological Inquiry	3
CHEM 360 – Physical Chemistry I	4	VUSM 400 – The Ethical Life	3
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>
<b>Total VU credits 102</b>			

Courses required for admission to the MCW School of Pharmacy are highlighted in red.

\*ENGL 105 or 195 can be substituted

\*\*BIOL 250 can be substituted for MCW's required oral communication course

This assumes reverse transfer of 18 total credits from the School of Pharmacy to fulfill the requirements for a bachelor of science degree (120 total credits) with a major in biology as follows:

MCW Year 1 PharmD Course	VU Reverse Transfer Course	Credits Toward B.S.
518 – Principles of Drug Actions, Pharmacokinetics/Dynamics	CHEM 362 – Physical Chemistry II	4
520 – Pharmaceutical Calculations	CHEM 330 – Analytical Chemistry	4
517 – Principles of Medicinal Chemistry	CHEM 440 – Adv. Organic Chemistry	4
511 – Biochemistry	CHEM 475 – Advanced Biochemistry	4
540/1 – Intro. Pharmacy Practice Exp.	BIOL 498 & 499 – Research Strategies	3
	<b>Total</b>	<b>19</b>