

Note that this is a "Typical Program." Actual programs will vary. See the Academic Catalog for official details.

**CHEMISTRY B.S. DEGREE****Advisor: Drs. Nalliah and Troyer**

<b>Fall 2015</b>		<b>Spring 2016</b>			
<u>CH 161:</u>	<u>Principles of Chemistry I</u>	4	<u>CH 162:</u>	<u>Principles of Chemistry II</u>	4
<u>MA 171:</u>	<u>Analytic Geometry &amp; Calculus I<sup>1</sup></u>	4	<u>MA 172:</u>	<u>Analytic Geometry &amp; Calculus II<sup>1</sup></u>	4
HS 115:	Hist Persp on Cult & Civ I	3	BI 161:	Cell Biology <sup>2</sup>	4
EN 121:	Academic Writing and Research	3	HS 116:	Hist Persp on Cult & Civ II	3
EX 101:	Wellness for Life	2			
	<b>total</b>	<b>16</b>		<b>total</b>	<b>15</b>
<b>Fall 2016</b>		<b>Spring 2017</b>			
<u>CH 263:</u>	<u>Organic Chemistry I</u>	4	<u>CH 264:</u>	<u>Organic Chemistry II</u>	4
<u>MA 273:</u>	<u>Analytic Geometry &amp; Calculus III</u>	4	<u>PH 212:</u>	<u>Principles of Physics II</u>	4
<u>PH 211:</u>	<u>Principles of Physics I</u>	4	* <u>PH 261:</u>	<u>Analog and Digital Electronics</u>	2
EN 151:	Perspectives on Literature	3	BR 111:	Biblical History and Literature	3
				Core Curriculum Social Science	3
	<b>total</b>	<b>15</b>		<b>total</b>	<b>16</b>
<b>Fall 2017</b>		<b>Spring 2018</b>			
* <u>CH 331:</u>	<u>Quantitative Analysis</u>	4	* <u>CH 333:</u>	<u>Instrumental Analysis</u>	4
* <u>CH 411</u>	<u>Biochemistry<sup>2</sup></u>	3	* <u>MA 371:</u>	<u>Differential Equations</u>	4
* <u>CH 451:</u>	<u>Seminar in Chemistry</u>	1	PL____:	Introduction to Philosophy/Ethics	3
CO 215:	Public Speaking	3		Creative Studio Arts	1
MI 285:	Core Curriculum Christian Faith	3		Elective [300+ level] <sup>4</sup>	3
	<b>total</b>	<b>14</b>		<b>total</b>	<b>15</b>
<b>Fall 2018</b>		<b>Spring 2019</b>			
* <u>CH 361:</u>	<u>Physical Chemistry I</u>	4	* <u>CH 371:</u>	<u>Physical Chemistry II</u>	4
* <u>CH 441:</u>	<u>Advanced Inorganic Chemistry</u>	3	BR____:	Bible Elective [300+ level]	3
<u>CH 491:</u>	<u>Undergraduate Research<sup>3</sup></u>	1-2		Core Curriculum Social Science	3
115:	Introduction to AR/DM/MU/TH	2		Electives	5
	Elective [300+ level] <sup>4</sup>	3			
	Elective	3			
	<b>total</b>	<b>16-17</b>		<b>total</b>	<b>15</b>

**NOTES:**

1. Chemistry majors not yet placing into MA 171/172 should take MA 141 in the Spring of the freshman year (*see mathematics placement policy in Catalog under Academic Information*).
2. BI 161 Cell Biology is recommended as an elective. Students may choose to take BI 161 in the Spring of the Freshman, Sophomore, or Junior year depending on the need for early fulfillment of prerequisites for other Biology courses. BI 161 is recommended before CH 411 Biochemistry.
3. Chemistry majors must complete chemical research for graduation. CH 491 should be taken during the summer before the student's senior year. It is imperative that the student apply to summer programs in the winter of the junior year at the latest. Application in the sophomore year is encouraged.
4. Majors must be careful in selection of electives so that a sufficient number of upper division courses are taken. A minimum of 36 hours of 300+ courses is required for graduation.

\*Indicates alternating year course.

Underlining indicates required for major.