

## Providence Extension Program

### Chemistry • 2016-2017

Class times • T/R 12-1pm and 1-2pm

#### Textbook

Chemistry Student Text, 3rd Ed., BJU Press (2009), ISBN 978-1-59166-540-3 and Chemistry Student Lab Manual, 3rd edition, BJU Press (2008), ISBN 978-1-59166-612-7

#### Materials Needed

Notebook paper (looseleaf or in a notebook), pen or pencil, scientific or graphing calculator

#### Prerequisites

Pre-Algebra (recommended to have taken or be concurrently taking Algebra 1)

#### Course description

Chemistry is the study of matter and its interactions. Although not usually everyone's favorite subject, chemistry can open one's eyes to the magnificent intelligence of our Creator, and explain phenomena that occur in our everyday lives. This course will include topics such as the compositions and classifications of matter, atomic structure, molecular interactions, chemical reactions, and factors that affect matter and how it interacts. Diligent students will walk away from this course with a reverent appreciation of God's Intelligent Design, and a deeper understanding of how the world around us speaks of His mighty power.

#### Grading Scale and Weights

A:	90 to 100	Homework	15%
B:	80 to 89	Tests	50%
C:	70 to 79	Labs	25%
D:	60 to 69	Participation	10%
F:	0 to 59		

#### Other information

Please make use of the above contact methods for help with homework during the week (including weekends). If you call and there is no answer, please leave a message. Do NOT send texts or contact me via Engrade, please. Whether you send an email or leave a voicemail, please remember that I am teaching all day each weekday, so I might not get to respond immediately.

### J. Arnold

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Office hours: M/T/R 4-7pm; F 8-9am

#### Class Time

The co-op classes will be as scheduled according to PEP. The time will be used to lecture over the lessons being covered that week, including problem solving in class, and possible review of the lessons covered in the last class. Students are encouraged to take copious notes (especially copying the examples). Some class time, on a regular basis, will be devoted to performing labs in class. Students are expected to be in class on time with the appropriate materials.

#### Homework

Homework will be assigned for each chapter, and will be graded by the instructor. Problems are expected to be worked out in entirety. Partial credit will not be given. It is important to observe due dates for the homework, as it is usually the best aid in preparation for exams. Half-credit penalties may be applied to late assignments.

#### Tests

Tests will be administered online, via EngradePro. The tests will be closed- book and closed-notes unless otherwise specified; the test is to be taken at one sitting, supervised by the parent, and within a 75-minute timeframe. A 10% deduction may be taken for every class period after the due date that a test must be extended. If a student has questions regarding an exam, he/she may try to contact the instructor for help, but should still complete all items as thoroughly as possible. The student should notify the instructor of any misunderstood or unclear items immediately during or after the test (via phone or email). This is the only opportunity to dispute problems. Concessions will not be made for any reason if this testing procedure is not followed.

#### Labs

On a regular basis, some class time will be used to conduct laboratory experiments as instructed in the text or other sources. You will be expected to bring a scientific calculator (graphing calculators are recommended), safety glasses or goggles, and your lab notebook. A few labs in their entirety will be assigned as homework, where appropriate.

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Quarter	Week #	Day	Date	Content	Quarter	Week #	Day	Date	Content	
1	1	Tue.	8/23/16	Matter (2)	3	17	Tue.	1/10/17	Solids and Liquids (11)	
		Thu.	8/25/16	Matter (2)			Thu.	1/12/17	Solids and Liquids (11)	
	2	Tue.	8/30/16	Measuring and Calculating (3)		18	18	Tue.	1/17/17	Solutions (12)
		Thu.	9/1/16	Measuring and Calculating (3)				Thu.	1/19/17	Solutions (12)
	3	Tue.	9/6/16	Labor Day		19	19	Tue.	1/24/17	Solutions (12)
		Thu.	9/8/16	Measuring and Calculating (3)				Thu.	1/26/17	Chemical Thermodynamics (13)
	4	Tue.	9/13/16	Measuring and Calculating (3)		20	20	Tue.	1/31/17	Chemical Thermodynamics (13)
		Thu.	9/15/16	Atomic Structure (4)				Thu.	2/2/17	Chemical Thermodynamics (13)
	5	Tue.	9/20/16	Atomic Structure (4)		21	21	Tue.	2/7/17	Chemical Thermodynamics (13)
		Thu.	9/22/16	Atomic Structure (4)				Thu.	2/9/17	Chemical Kinetics (14)
	6	Tue.	9/27/16	Atomic Structure (4)		22	22	Tue.	2/14/17	Chemical Kinetics (14)
		Thu.	9/29/16	Elements (5)				Thu.	2/16/17	Chemical Kinetics (14)
	7	Tue.	10/4/16	Elements (5)		23	23	Tue.	2/21/17	Chemical Kinetics (14)
		Thu.	10/6/16	Elements (5)				Thu.	2/23/17	Chemical Equilibrium (15)
	8	Tue.	10/11/16	Make-up Week		24	24	Tue.	2/28/17	Chemical Equilibrium (15)
		Thu.	10/13/16	Chemical Bonds (6)				Thu.	3/2/17	Chemical Equilibrium (15)
9	Tue.	10/18/16	Chemical Bonds (6)	Spring Break	Spring Break	3/7/17-3/16/17	Spring Break	Spring Break		
	Thu.	10/20/16	Chemical Bonds (6)							
10	Tue.	10/25/16	Bond Theories and Molecular Geometry (7)	25	25	Tue.	3/21/17	Acids, Bases, and Salts (16)		
	Thu.	10/27/16	Bond Theories and Molecular Geometry (7)			Thu.	3/23/17	Acids, Bases, and Salts (16)		
11	Tue.	11/1/16	Bond Theories and Molecular Geometry (7)	26	26	Tue.	3/28/17	Acids, Bases, and Salts (16)		
	Thu.	11/3/16	Chemical Composition and Reactions (8)			Thu.	3/30/17	Acids, Bases, and Salts (16)		
12	Tue.	11/8/16	Chemical Composition and Reactions (8)	27	27	Tue.	4/4/17	Oxidation-Reduction (17)		
	Thu.	11/10/16	Chemical Composition and Reactions (8)			Thu.	4/6/17	Oxidation-Reduction (17)		
13	Tue.	11/15/16	Chemical Calculations (9)	28	28	Tue.	4/11/17	Oxidation-Reduction (17)		
	Thu.	11/17/16	Chemical Calculations (9)			Thu.	4/13/17	Organic Chemistry and Biochemistry (18)		
Thanksgiving Break	11/22/16-11/24/16	Thanksgiving Break	29	29	29	Tue.	4/18/17	Organic Chemistry and Biochemistry (18)		
	11/22/16-11/24/16	Thanksgiving Break				Thu.	4/20/17	Organic Chemistry and Biochemistry (18)		
14	Tue.	11/29/16	Chemical Calculations (9)	30	30	Tue.	4/25/17	Modern Materials (19)		
	Thu.	12/1/16	Chemical Calculations (9)			Thu.	4/27/17	Modern Materials (19)		
15	Tue.	12/6/16	Gases (10)	31	31	Tue.	5/2/17	Nuclear Chemistry (20)		
	Thu.	12/8/16	Gases (10)			Thu.	5/4/17	Nuclear Chemistry (20)		
16	Tue.	12/13/16	Gases (10)	32	32	Tue.	5/9/17	Review for Final Exam		
	Thu.	12/15/16	Make-up Week			Thu.	5/11/17	Review for Final Exam		

\*Please be advised that this is a tentative schedule. Due dates on EngradePro should be considered the final authority in regards to pacing. Some chapters or lessons may be omitted as necessary if the class gets behind schedule.