

**NUCLEAR POWER SCHOOL (NPS) ASSIGNMENTS IN THE CHEMISTRY SUBJECT  
FOR NON-TECHNICAL MAJORS**

TITLE AND VOLUME OF DOE FUNDAMENTALS HANDBOOK	MODULE NUMBER AND TITLE	TOPIC	ASSIGNMENT	
<a href="#">"Chemistry" Volume 1 of 2</a>	Module 1 - "Fundamentals of Chemistry"	"Characteristics of Matter"	Read page 1.	
		"The Atom Structure"	Read pages 2 and 3.	
		"Chemical Elements," "Chemical Symbols," "Atomic Number," "Atomic Mass Number," "Atomic Weight"	Read pages 3 through 7.	
		"Molecules"	Read pages 7 and 8.	
		"Avogadro's Number," "The Mole," "Mole of Molecules"	Read pages 8 through 10.	
		"Periodic Table,"	Read pages 12 through 15.	
		"Classes of the Periodic Table"	Read pages 16 through 18.	
		"Group Characteristics"	Read pages 18 and 19.	
		<b>Do NPS Section 1 Problems and Questions</b>		
		"Chemical Bonding"	Read pages 23 and 24.	
		"Ionic Bonds," "Covalent Bonds"	Read pages 24 through 27.	
		"Van der Waals Forces"	Read pages 27 through 28.	
		"Basic Chemical Laws," "Forming Chemical Compounds," "Combining Elements"	Read pages 31 through 33.	
		"Le Chatelier's Principle"	Read page 36.	
		"Molarity"	Read pages 37 and 38.	
		"Parts per Million"	Read page 39.	
		"Chemical Equations," "Balancing Chemical Equations"	Read pages 40 through 44.	
"Acids," "Bases," "Salts"	Read pages 46 through 48.			

		"pH"	Read pages 48 and 49.
		"Dissociation Constant"	Read pages 50 and 51.
<b>Do NPS Section 2 Problems and Questions</b>			

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<a href="#">"Chemistry"</a> <a href="#">Volume 1 of 2</a>	Module 2 - "Corrosion"	"Corrosion"	Read pages 1 and 2.	
		"Electrochemical Cells"	Read pages 3 through 5.	
		"Oxidation-Reduction Reactions"	Read pages 5 and 6.	
		"Passivity and Polarization of Metal"	Read pages 6 through 9.	
		"Conditions Leading to General Corrosion," "Corrosion of Iron"	Read pages 11 through 13.	
		"Factors Affecting General Corrosion Rate"	Read pages 13 through 16.	
		"Prevention Chemistry Control"	Read pages 16 and 17.	
		"Crud"	Read pages 22 and 23.	
		"Galvanic Corrosion," "Prevention of Galvanic Corrosion"	Read pages 23 through 25.	
		"Pitting and Crevice Corrosion"	Read pages 27 through 31.	
		"Stress Corrosion Cracking"	Read pages 31 through 35.	
		<b>Do NPS Section 3 Problems and Questions</b>		