

Chem 432H: Honors Advanced Inorganic Chemistry

General Course Description:	Syllabus is attached.																					
Honors Contract Topic:	The honors portion of Chem 432 will consist of some laboratory projects along with a written report of these projects. The non-honors course does not have a lab component.																					
Methodology/Approach:	The synthesis of one or more complexes of a titanium halide with a crown ether will be attempted. Research in inorganic chemistry can involve a number of techniques not often found in organic chemistry. This project will involve the attempted synthesis of a metal complex and the characterization of that complex. Characterization methods may include IR spectra, magnetic moment determinations, and X-ray crystallography. Laboratory work should average about 5 hr/wk. As each of the methods is done, a small (2-3 pages) paper describing the process will be written. Methods involving the manipulation of air-sensitive compounds will be used, including vacuum line techniques and some glass blowing. Some searching of the chemical literature will be done.																					
Resources:	Chemical literature from past research experiences and chemistry journals.																					
Evaluation:	Evaluation of the honors component will consist of quality of work done (50%), the 3 or 4 short papers describing experimental methods used (25%)(graded on content and clarity) and a final report (~10 pages) (content and clarity) (25%). The student will use part of her portion of class discussion as a 5-10 minute power point presentation at the end of the project. As before I am uncertain how I can reduce the quantitative work of the student in the course. Material needs to be mastered and this is done by doing the problem sets. So there will probably be more work quantitatively.																					
Grade Distribution/Criteria:	Please list the grade breakdown for both non-honors and honors students in the course.																					
Course Component	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%; text-align: center;">Non-Honors (Points or %)</th> <th style="width: 35%; text-align: center;">Honors (Points or %)</th> </tr> </thead> <tbody> <tr> <td><u>3 Exams</u></td> <td style="text-align: center;"><u>300 points</u></td> <td style="text-align: center;"><u>255 points</u></td> </tr> <tr> <td><u>Problem Sets</u></td> <td style="text-align: center;"><u>100 points</u></td> <td style="text-align: center;"><u>100 points</u></td> </tr> <tr> <td><u>Class Discussion</u></td> <td style="text-align: center;"><u>100 points</u></td> <td style="text-align: center;"><u>55 points</u></td> </tr> <tr> <td><u>Final</u></td> <td style="text-align: center;"><u>200 points</u></td> <td style="text-align: center;"><u>185 points</u></td> </tr> <tr> <td><u>Oral/Lab</u></td> <td style="text-align: center;"><u>0 points</u></td> <td style="text-align: center;"><u>105 points</u></td> </tr> <tr> <td>SUM</td> <td style="text-align: center;">700 points</td> <td style="text-align: center;">700 points</td> </tr> </tbody> </table>		Non-Honors (Points or %)	Honors (Points or %)	<u>3 Exams</u>	<u>300 points</u>	<u>255 points</u>	<u>Problem Sets</u>	<u>100 points</u>	<u>100 points</u>	<u>Class Discussion</u>	<u>100 points</u>	<u>55 points</u>	<u>Final</u>	<u>200 points</u>	<u>185 points</u>	<u>Oral/Lab</u>	<u>0 points</u>	<u>105 points</u>	SUM	700 points	700 points
	Non-Honors (Points or %)	Honors (Points or %)																				
<u>3 Exams</u>	<u>300 points</u>	<u>255 points</u>																				
<u>Problem Sets</u>	<u>100 points</u>	<u>100 points</u>																				
<u>Class Discussion</u>	<u>100 points</u>	<u>55 points</u>																				
<u>Final</u>	<u>200 points</u>	<u>185 points</u>																				
<u>Oral/Lab</u>	<u>0 points</u>	<u>105 points</u>																				
SUM	700 points	700 points																				