**Advanced Inorganic Chemistry I (CHE 442)**

| **Potential Instructors**<sup>*</sup> | Dr. Shabnam Hematian; [s_hemati@uncg.edu](mailto:s_hemati@uncg.edu)  
Dr. Jerry Walsh; [jlwalsh@uncg.edu](mailto:jlwalsh@uncg.edu) |
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<td><strong>Prerequisites</strong></td>
<td>CHE 342; CHE 406 or CHE 461 are recommended</td>
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<td><strong>Corequisites</strong></td>
<td>None</td>
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| **Sample Course Materials**       | **Textbook:** *Inorganic Chemistry* by Catherine E. Housecroft and Alan G. Sharpe  
*Inorganic Chemistry* by Mark Weller, Tina Overton, Jonathan Rourke, and Fraser Armstrong |
| **For Whom Planned**              | CHEM and BCHE majors                                           |
| **Topical Outline**<sup>§</sup>   | - Basic Concepts: Atoms  
- Basic Concepts: Molecules  
- Introduction to Molecular Symmetry  
- Bonding in Polyatomic Molecules  
- Acids and Bases  
- Reduction and Oxidation  
- \(d\)-Block Metal Chemistry: General Consideration  
- \(d\)-Block Metal Chemistry: Coordination Complexes  
- Crystal Field Theory and Ligand Field Theory  
- \(d\)-Block Metal Complexes: Reaction mechanisms  
- Organometallic Chemistry vs. Bioinorganic Chemistry |
| **Notes**                         | * To request a comprehensive syllabus, you may contact the instructor for your section directly.  
<sup>§</sup>Subject to change |