

Chemistry -the Central Science



General Chemistry

Instructor: *Ping Liu*

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Instructor's office hour: Wed. 3:00-4:00 pm

Syllabus 2010-Fall



| Month | Day | Reading | Subject |
|-------|----------------|---------|--|
| Sep. | 8-Wed (Wk 1) | Ch. 2 | Course Orientation and Overview of Chemistry |
| | 15- Wed (Wk 2) | Ch.6 | Electronic structure of atoms 6.4-6.6 |
| | 19- Wed (Wk 2) | Ch.6 | Electronic structure of atoms 6.7-6.9 |
| | 22- Wed (Wk 3) | | (Mid-autumn Festival Holiday) |
| | 29- Wed (Wk 4) | Ch.8 | Basic concepts of chemical bonding 8.1-8.5 |
| Oct. | 6- Wed (Wk 5) | | (National day holiday) |
| | 13- Wed (Wk 6) | | (Expo 2010) |
| | 20-Wed (Wk 7) | Ch. 9 | Molecular Geometry and bonding Theories 9.1, 9.3-9.4 |
| | 27-Wed (Wk 8) | Ch. 9 | Molecular Geometry and bonding Theories 9.5-9.6 |

Syllabus 2010-Fall



| Month | Day | Reading | Subject |
|-------|--------------------------------------|----------------|---|
| Nov. | 3-Wed (Wk 9) | Ch.5 | Thermochemistry 5.1-5.4 |
| | 10-Wed (Wk 10) | Ch.5 | Thermochemistry 5.5-5.7 |
| | 17-Wed (Wk 11) | Ch 19 | Chemical Thermodynamics 19.1-19.4 |
| | 24-Wed (Wk 12) | Ch.19 | Chemical Thermodynamics 19.5--19.6 Chemical equilibrium 15.1 Chemical Thermodynamics 19.7 |
| | 30-Tues (Wk 13) 6:00-8:00 | | Mid-Term (Chap.6, 8, 9, 5,19) |
| Dec. | 1-Wed (Wk 13) | Ch.20 | Electrochemistry 20.3, 4, 5 |
| | 8-Wed (Wk 14) | Ch.20 | Electrochemistry 20.6, 8, 9 |
| | 15-Wed (Wk 15) | Ch.12 | Modern Materials 12.1, 2, 3 |
| | 22-Wed (Wk 16) | Ch.12 Ch.22 | Modern Materials 12.4, 5, Chemistry of nonmetals 22.9-10 |
| | 29-Wed (Wk 17) | Ch.23 | Metals & Metallurgy 23.5, 6, 7, 8 |
| Jan. | 5-Wed (Wk 18) | | Review |
| | Wk19-20 | | Final |

Grading Policy



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|---------------------------------------|------------|------|
| 1. Midterm exams | 100 pts | 30% |
| 2. Final exam | 100 pts | 40 % |
| 3. 10 homework assignments | | |
| Class attendance and participation | 15 × 10pts | 15 % |
| 4. Project | 15pts | 15 % |

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|--------|--|------|
| Total: | | 100% |
|--------|--|------|

Projects



Group research work:

“To understand the modern materials”

- 1. liquid crystals (液晶)**
- 2. Alloys (合金)**
- 3. Polymers (聚合物)**
- 4. Semi-conductive materials (半导体材料)**
- 5. Nano-materials (纳米材料)**
- 6.**