# Elementary Chemistry

CHEM 1110

Spring 2023


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| **Instructor:** | Matthew Rowley | **Office Hours:** | Daily 10:00 am – 11:00 am |
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Please include the course number in the subject line of all correspondence.


## Tentative Schedule

This class will meet on Mondays, Wednesdays, and Fridays from 2:00 – 2:50 am in room 230 of the science center (SC). Note that this classroom is in the corner of the building, and not in one of the main hallways:
For the best lecture experience, read the indicated textbook chapter *before* each lecture.

| | Date | Topic | Chapter |
|---|---|---|---|
| Week 1 | M, Jan. 9 | Chemistry: The Central Science | 1.1–1.2 |
| | W, Jan. 11 | Elements and the Periodic Table | 1.3–1.6 |
| | F, Jan. 13 | Measuring Physical Quantitites | 1.7–1.9 |
| Week 2 | M, Jan. 16 | **Martin Luther King Day – No Class!** | |
| | W, Jan. 18 | Numbers and Math in Chemistry | 1.10–1.12 |
| | F, Jan. 20 | Temperature, Heat, and Derived Units | 1.13–1.14 |
| Week 3 | M, Jan. 23 | Atoms, Elements, and Isotopes | 2.1–2.3 |
| | W, Jan. 25 | Atomic Weight, Periodic Table, and Atomic Structure | 2.4–2.6 |
| | F, Jan. 27 | Electron Configuration | 2.7–2.9 |
| Week 4 | M, Jan. 30 | **Catch-up/Review Day - Midterm Exam 1 (Ch. 1–2)** | |
| | W, Feb. 1 | Ions and Ionic Bonds | 3.1–3.4 |
| | F, Feb. 3 | Ionic Compounds | 3.5–3.7 |

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| Week 5 | M, Feb. 6 | Naming Ionic Compounds | 3.8–3.11 |
| | W, Feb. 8 | Molecular Compounds | 4.1–4.3 |
| | F, Feb. 10 | Covalent Bonds and Molecules | 4.4–4.7 |
| Week 6 | M, Feb. 13 | Molecular Structure | 4.8–4.9 |
| | W, Feb. 15 | Polarity and Binary Molecular Compounds | 4.10–4.11 |
| | F, Feb. 17 | **Catch-up/Review Day - Midterm Exam 2 (Ch. 3–4)** | |
| Week 7 | M, Feb. 20 | **President's Day – No Class!** | |
| | W, Feb. 22 | Balancing Chemical Reactions | 5.1–5.3 |
| | F, Feb. 24 | Classes of Chemical Reactions | 5.4–5.6 |
| Week 8 | M, Feb. 27 | **Spring Break – No Class!** | |
| | W, Mar. 1 | **Spring Break – No Class!** | |
| | F, Mar. 3 | **Spring Break – No Class!** | |
| Week 9 | M, Mar. 6 | Redox Reactions | 5.7–5.8 |
| | W, Mar. 8 | Chemical Calculations I | 6.1–6.3 |
| | F, Mar. 10 | Chemical Calculations II | 6.4–6.5 |
| Week 10 | M, Mar. 13 | Chemical Reactions: Energy and Rates | 7.1–7.3 |
| | W, Mar. 15 | Chemical Reactions: Equilibrium | 7.4–7.6 |
| | F, Mar. 17 | Equilibrium Equations | 7.7–7.9 |
| Week 11 | M, Mar. 20 | **Catch-up/Review Day - Midterm Exam 3 (Ch. 5–7)** | |
| | W, Mar. 22 | Gases and Kinetic Molecular Theory | 8.1–8.3 |
| | F, Mar. 24 | Pressure and Gas Laws | 8.4–8.7 |
| Week 12 | M, Mar. 27 | Gas Laws | 8.8–8.11 |
| | W, Mar. 29 | Liquids and Solids | 8.12–8.15 |
| | F, Mar. 31 | Solutions | 9.1–9.4 |

| | Date | Topic | Chapter |
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| Week 13 | M, Apr. 3 | Solubility and Dilution | 9.5–9.9 |
| | W, Apr. 5 | Ions in Solution: Electrolytes | 9.10–9.13 |
| | F, Apr. 7 | Acids and Bases | 10.1–10.5 |
| Week 14 | M, Apr. 10 | Acids and Bases – Calculations | 10.6–10.10 |
| | W, Apr. 12 | Buffers and Titrations | 10.11–10.14 |
| | F, Apr. 14 | **Catch-up/Review Day - Midterm Exam 4 (Ch. 8–10)** | |
| Week 15 | M, Apr. 17 | Nuclear Chemistry | 11.1–11.5 |
| | W, Apr. 19 | Nuclear Chemistry and Radiation | 11.6–11.11 |
| | F, Apr. 21 | **Catch-up/Review Day - Final Exam** | |
| Finals Week | R, Apr. 27 | **Final Exam 1:00–2:50 Bring a pencil and scantron** | |