**Course Design/Development Alignment Grid (CHEM 1210)**

**Dream Statement:** Students who take this course will use quantitative reasoning and logic to ask and answer questions leading to the solution or understanding of chemistry or other quantitative problems. [FK][APP] Students will understand how the molecular nature of matter effects its macroscale properties. [FK] Students will apply lessons learned in this course to future courses in science, engineering, or applied fields. [APP] [LL]

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| **Objectives** | **Assessments**  **(high-stakes/summative)** | **Activities**  **(low-stakes/formative/practice)** |
| 1) Students will review the basic mathematical concepts required for quantitative reasoning in chemistry. [FK] | Midterm 1  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |
| 2) Students will be able to identify the correct mathematical concepts required to solve various chemistry problems and will use these concepts to successfully solve problems in chemistry. [FK] [APP] | Midterm 1  Midterm 2  Midterm 3  Final Exam | MADRA Homework (at least weekly)  Discussions & Discussion Activities\*\*  Practice Midterms w/ reflection  Clicker questions\*\* |
| 3) Students will be able to draw chemical structures in order to understand chemical reactivity. [FK] [APP] | Midterm 2  Midterm 3  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |
| 4) Students will understand the concept of energy as it relates to molecules and chemical systems. [FK] | Midterm 2  Midterm 3  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |
| 5) Students will understand the different forces that hold molecules together and are responsible for interactions between molecules. [FK] | Midterm 3  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |
| 6) Students will understand aspects of the quantum behavior of atoms and subatomic particles. [FK] | Midterm 2  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |
| 7) Students will work towards managing the pace of their studies and will take responsibility for frequent practice in order to best master and deeply learn course concepts. [LL] [APP] [FK] | Midterm 1  Midterm 2  Midterm 3  Final Exam | MADRA Homework (at least weekly)  Practice Midterms w/ reflection  Clicker questions\*\* |

**ALIGNMENT GRID INFO (LEGEND)**

**Objectives:** What do you want your students to be able to know, do, or feel about the content?

**Assessments:** How will learning be assessed?

**Activities**:What activities are you going to use to help your students to engage with content, interact with you, and their peers?

[FK] Foundational Knowledge

[APP] Application

[INT] Integration

[HD] Human Dimension

[CAR] Caring

[LL] Learning to Learn