Online Exams!

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Online Exams

• Talk about Academic Honesty with your class
• Have an Academic Honesty pledge
• Start the exam with a statement on academic honesty
• Define what is acceptable and what is NOT acceptable
  • Open notes
  • Open book
  • No outside websites
• Set a time limit scheduled well in advance
Online Exams

• Add in more “low stake” assessments

<table>
<thead>
<tr>
<th>CHE 106 pre-2017</th>
<th>CHE 106 Today</th>
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</thead>
<tbody>
<tr>
<td>80% exams (4, 20% each)</td>
<td>50% exams (4 exams, 12.5% each)</td>
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<tr>
<td>20% homework</td>
<td>20% homework (pre/post)</td>
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<tr>
<td></td>
<td>10% weekly recitation problem set</td>
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<tr>
<td></td>
<td>(10 problem sets, 1% each)</td>
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<td></td>
<td>10% practice exams (4, 2.5% each)</td>
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<td></td>
<td>5% class participation</td>
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<td>5% discussion board participation</td>
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Online Exams

- Base questions on in class experiences/discussions/demonstrations

**Impact of Acid Rain in NY**

1. Granite (SiO₂) is the predominant bedrock in the Adirondacks. Limestone (CaCO₃) is the predominant bedrock in CNY.

2. Acid rain is then added to both bedrock samples. The solution contains bromothymol blue, a pH indicator that is yellow in acidic conditions and blue above pH 7.4.

3. The solution is added to the granite sample and remains acidic because the granite is unable to buffer against the acid.

4. The solution is added to the limestone sample and the acid is neutralized as indicated by the change of the solution color from yellow to blue. This change occurs because limestone ionizes into calcium and carbonate. Carbonate (CO₃²⁻) is able to react with and neutralize the acid.
Online Exams

- Formula questions with defined variables
- Creates different variables each time the question is generated
Online Exams

- Don’t use publisher provided test banks!
- Hack to creating multiple versions of questions w/ excel

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<th>A</th>
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<th>C</th>
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<tbody>
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<td>moles</td>
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<td>mass product</td>
<td>wrong moles</td>
<td>wrong conversion 1</td>
<td>wrong conversion 2</td>
<td>wrong mass</td>
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Problem Sets

- Fun and easy to grade problem sets
Problem Sets

- Flippity.net – free, google forms for different activities
“Chemistry in My Life”

• 1-page infographic diving into the chemistry of something from your life, hobby, major, etc.

The Chemistry of Polymer Clay

Polymer clay is a form of modeling clay that can be hardened. It was first polymer clay is high school. I first used it; I find myself enjoying creating things with it.

What is polymer clay?
A rigid plastic, most known for its use in construction, PVC is synthesized during radical.

PVC

Hardening

As we can see, the main components of polymer clay is PVC. But what separates a PVC copolymer from polymer clay is the plasticizer. Unlike PVC, which

The Chemistry of Mascara

Mascara is a cosmetic product used to amplify eyelashes and give a more enhanced look to the eye. The product darkens, lengthens, and thickens, and curls eyelashes.

What is it?

Mascara can be water soluble or water-proof. Water-proof mascara is hydrophobic and nonpolar with bases in substances that resist water, for example dodecane. The non-water-proof mascara is hydrophilic and tends to have weak hydrogen bonds.

Components

Although there are different forms of mascara, which include liquid, cake, or cream, they all contain 4 basic components. These components include pigments, oils, waxes, and preservatives.

Waves

Mascara is a cosmetic product used to amplify eyelashes and give a more enhanced look to the eye. The product darkens, lengthens, and thickens, and curls eyelashes.

The Chemistry of a Latte

Chemistry of a Latte

The Maillard Reaction

The Maillard reaction is when amino acids and reducing sugars in foods react to cause a distinct flavor and brown color in browning foods such as sausages or roast. This reaction can also be seen when steaming milk for a latte. Browning occurs when amino acids (proteins) react with reducing sugars. When milk is heated beyond a temperature of 212°F (100°C), the Maillard reaction begins. If the milk goes beyond this temperature, the molecules continue to react, and this can lead to caramelization and dehydrogenation reactions that will lead to an unsavory flavor.

Milk Foam

There is a fine line between steamed milk and milk foam. A latte has more milk than foam, but the production of foam can happen faster than expected. Lighter, foamier, and airflow can all affect how the milk changes. Milk foam can be made with milk powder; however, rapid air movement is a more common technique. Both methods involve the interaction between air and milk, which is neither stable because it involves a gas and a liquid. This gets stabilized by the milk proteins acting on the air bubbles on the surface, which creates a highly stable surface layer of foam. The quality of the foam is also very important, and if the milk has already undergone breakdown, in which the enzymes loose break down the fat globules, it can create risk bubbles.
Online Exams

• Change your mode of assessment
• “Chemistry in the News”
• 2-3 page essay on a current science article
• Limit the source of the article