HONORS 2030
Weber State University
Fall 2019
Mondays and Wednesdays 11:00 – 12:20
Location: TY 366 and KA 305/307
3 Credit Hours

Syllabus

Brandon J. Burnett, Ph. D.  
Tracy Hall 255R  
Tel: 801–626–6221  
Email: brandonburnett@weber.edu

Dianna Huxhold, Ph. D.  
Kimball Visual Arts Center 321  
Tel: 801-626-6527  
Email: diannahuxhold@weber.edu

Course Description

This course is a special investigation of the relationship between chemistry and art. Students will learn about different art media from a chemical perspective and a visual arts perspective. This discussion will build to a higher level of learning where students will investigate how chemistry and art approach a broader concept. Finally, students will explore how to represent all of this in project based “artifacts”, visually showing the connection between chemistry and art.

In this course we will be answering a “big question”: How does the integration of science and visual art help to more fully understand your world?” See the self-reflection section below for more information.

Student Learning Outcomes

Upon successful completion of this course, students will be able to demonstrate their understanding of the following in context of using science and the visual arts to help describe our world:
1. **Organization of systems:** The universe is scientifically understandable in terms of interconnected systems. The systems evolve over time according to basic physical laws.
2. **Matter:** Matter comprises an important component of the universe, and has physical properties that can be described over a range of scales.
3. **Energy:** Interactions within the universe can be described in terms of energy exchange and conversion.
4. **Forces:** Equilibrium and change are determined by forces acting at all organizational levels.
5. **Content Knowledge:** Understanding of the worlds in which students’ live and disciplinary approaches for analyzing those worlds.
6. **Intellectual Tools:** Use of and facility with skills necessary for students’ to construct knowledge, evaluate claims, solve problems, and communicate effectively.
7. **Responsibility to self and others**: relationships with, obligations to, and sustainable stewardship to students’ selves, others, and the world help to promote diversity, social justice, and personal and community well-being.

8. **Connected & Applied Learning**: Learning in general education classes can be connected and applied in meaningful ways to new settings and complex problems.

**Required materials**

There is **no required textbook for the course**. Any important information will be provided by the instructors. There are recommended books that would help students through the course:


“The chemistry of art” Berry, M. and Osborne, C. 1st ed.

**Access to Perusall.com: BURNETT-FCIW9**

**Earning your grade**

Students’ course grade will be determined from the following:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Point Allotment</th>
<th>Points Earned</th>
<th>Percent</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Journal</td>
<td>300</td>
<td>930 – 1000</td>
<td>93.0+</td>
<td>A</td>
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<td></td>
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<td>900 – 929</td>
<td>90.0+</td>
<td>A–</td>
</tr>
<tr>
<td>Reading Assignments</td>
<td>200</td>
<td>870 – 899</td>
<td>87.0+</td>
<td>B+</td>
</tr>
<tr>
<td>Artifact Projects</td>
<td>300</td>
<td>830 – 869</td>
<td>83.0+</td>
<td>B</td>
</tr>
<tr>
<td>Final Reflection &amp; Report</td>
<td>200</td>
<td>800 – 829</td>
<td>80.0+</td>
<td>B–</td>
</tr>
<tr>
<td><strong>Total Points Available</strong></td>
<td><strong>1000</strong></td>
<td>770 – 799</td>
<td>77.0+</td>
<td>C+</td>
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<td></td>
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<td>730 – 769</td>
<td>73.0+</td>
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<td></td>
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<td>700 – 729</td>
<td>70.0+</td>
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<td></td>
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<td>670 – 699</td>
<td>67.0+</td>
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<td>630 – 669</td>
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<td>600 – 629</td>
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**Research Journal**

100% attendance and active class participation is fully expected of this course. During instructional or work days you will be required to take notes and keep track of your projects in a research journal that will be reviewed periodically to show your progress in chemical and art education throughout the semester. More information about your research journal will be given in class.
**Reading Assignments**

This class contains a rich and diverse group of students from all different academic backgrounds. In order to make sure that our classroom work and discussions are most effective, students will need to prepare for class by doing pre-reading on the topic that we will be working with in class that day. We will be using perusall.com (see access code in “required materials” to facilitate our pre-reading assignments. Perusall is a free website that tracks reading and retention of course materials. Not only will this be a way for us to make sure everybody reads and retains the topics before class, but it also is a way for the class to organically refine topics based on ideas that are most interesting or have troubled students most. Perusall works based on annotations that the class puts onto our text. If something within the text doesn’t make sense, you highlight the specific text and then ask a question to help detail what is not understood. Questions or statements of confusion are graded based on how detailed it is. A “I don’t’ get this” is graded poorly, whereas a “I understand that the color of a chemical is based on its electronic energies, but I don’t understand where these energies inherently come from and how it contributes directly to the color of the chemical.” Are graded higher. Once questions have been asked, then other students have the opportunity to answer them. This also contributes to your grade. The idea is that sometimes an instructor or book explains things in a confusing way, but if a peer is able to respond, it is often in a manner that will be better understood. A confusion report is sent to us with the most confusing portions of the reading and that is where we can put focus of the class’s discussions.

**Artifact Projects**

Each section of the class will be capped with an art project in which the concepts learned will be visually represented using a strategy discussed in class. There are five total strategies, and you will need to represent four of them. We will discuss this more in class. We will have three in-class days dedicated to each project. Any additional work needed to finish them will need to be done outside of class.

**Final Reflection and Report**

At the end of the semester, you will write a final reflection and report on your progress with the chemical topics and art techniques/ideas and how you find they relate. We will dedicate a week of in-class days on this discussion. The report will be due on Wednesday, December 11th at 12:30 P.M.