USU 1360 INTEGRATED PHYSICAL SCIENCE

So, are we on track for Integrated Physical Science Credit? Some things (in purple) are not a great match. Other things are perfect! I have included in square brackets what we are doing to address those issues.

Content:
The course will focus on the basic unifying concepts of the physical sciences. Among the topics to be covered will the structure of matter (from the atom to the earth to the universe, stressing the relevant associated length and time scales), the equivalence of mass and energy and their conservation in all known processes, and the magnitude and character of forces of nature. The course will emphasize how modeling, prediction, and observation lead to credible evidence, the contingent character of scientific knowledge, the use of mathematics and technology for describing the physical world [ILM on modeling], how that technology and its discoveries impact our daily lives [google, html], and that scientific discovery occurs within an ethical, historical and social context.

CRITERIA FOR APPROVED BREADTH COURSES: PHYSICAL SCIENCES

- The course should improve student's understanding of science as a process and promote their ability to apply scientific methods of investigation. [Scientific method, algorithms, programming]
- The course should provide a fundamental understanding of the unifying principles of physical science. [scientific method, modeling, problem solving, debugging, algorithms, programming]
- The course should assist students in understanding the human role in and impact on the physical environment. [google, security, social networks]
- The course should help students understand the role of technology as a factor that affects the development of physical science and brings physical science knowledge to our daily lives. [google, security, social networks, photo editing, sound editing]
- The course should consider the historical, social, and ethical contexts of physical science issues. [google, security, social networks, photo editing, sound editing]
- The course should assist students in making informed decisions about personal and social issues related to physical sciences (human component). [human interface design, web research, photo editing, sound editing]
- The course should promote inquiry and teach problem solving skills and hypothesis formulation and testing. [scientific methods, ILM exercises, programming]
- The course should help student to understand and evaluate original sources, e.g., original writings and/or presentations of data. [web research, survey]
- The course should include laboratory, field, data analysis, and/or computer simulation experiences. [modeling, computer simulation, ILM, programming]
- The course should require students to: a. Complete writing assignments; [webpage] b. Participate in collaborative activities; [inclass assignments] c. Use quantitative reasoning methods. [binary, modeling, scientific method, ILM, programming]
- This course should further the development of information literacy skills, including an understanding of the nature, organization, and method of access and evaluation of both electronic and traditional resources in the subject area. [web research]
- The course should provide opportunities for discussion. [inclass assignments]