

An Overview of Course Components

The table below describes various sections of the Earth and Space Science 2021 course. It should provide future participants with a realistic impression of their involvement and what is required from them. Though detailed, please do not be overwhelmed by the contents. This is an established course, and the pacing has worked well in the past. The course is equivalent to a 4-hour, semester-long Earth Science class with a lab (3 class contact hours and 2 lab contact hours per week). It qualifies for 3 CEU credits, available for purchase from the American Institute of Professional Geologists.

The weekly structure is similar to those described here, with the exception of the Pre-Course Self Evaluation and -Exams in Week 1 and Post-Course Self Evaluation and -Exams in Week 15.

In terms of deliverables, the application assignments are the equivalent of lab exercises and an important component. To maintain the flow of the course, assignments must be submitted in the same week as they are set. Due dates will be posted in the online system (following registration). We would like to remind students that there are frequent monitors set throughout the course. Monitors are designed to encourage students to keep on track, and though numerous, are short in nature.

Grading for the course will be calculated from scores in exams, monitors, application assignments, discussions, and quizzes. Details will be posted on the online system.

| Week | Course Component | Description |
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| Week 1 and 2 Origins of the Solar System | Pre-Course Exam | A two hour exam of 10 short- and 50 multiple choice questions set to provide a baseline for comparison with the Post-Course Exam after Week 14. |
| | Pre-Course Self-Evaluation | A short self-evaluation to measure your familiarity with the concepts and strategies that will be discussed in this course. You will re-evaluate your knowledge after Week 14. |
| | Lecture and progress monitors | Video lectures (20 - 40 minutes) present key concepts in Earth and space science. Progress monitor – a short series of multiple choice questions used to assess comprehension of the lecture. |
| | Presentations and progress monitors | PowerPoint presentations with narration that provide key concepts through text and visuals. Progress monitor – a short series of multiple choice questions used to assess comprehension of the presentation. |
| | Required Readings and progress monitors | Readings from selected sections of the lab manual compliment the material in the lectures and presentations, and introduce the laboratory activities. |

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| | Application Assignments 1 | Activities from the lab manual are focused on reinforcing the content from readings and encourage the development of practical skills. Assignments have been selected that are applicable, with modification, to classrooms. |
| | Demonstration videos | Key principles on topics including matter, processes, and scale, are demonstrated using physical apparatus (keyed to lab activities) |
| | Lab report progress monitors | Progress monitor – a short series of multiple choice questions used to assess comprehension of the readings, demonstration videos, and laboratory activities. |
| | Documentary video with guiding questions. | Students follow questions to stimulate ideas while watching selected sections of “Faces of Earth”. Students are not required to submit work and there is no progress monitor for this part. |
| | Video-related research and discussion. | Online research is conducted to provide a short answer about the current scientific thinking on a major content theme outlined in “Faces of Earth”. Students comment on two peer discussions. |
| | Weeks 1 and 2 Quiz | A weekly one hour quiz consisting of a short series of multiple choice questions. |