



# Course Syllabus

## SCI 201a

### Natural Science

#### Fall 2025

### Class Information

**Day and Time:** Tuesday: 4:45pm - 7:15pm

**Room Number:** E 201

### Contact Information

**Instructor Name:** Kirk Spencer

**Instructor Email:** [kspencer@criswell.edu](mailto:kspencer@criswell.edu)

**Instructor Phone:** 469.834.5211 (text first)

**Instructor Office Hours:** Tuesday: 2:00 to 4:00 pm

### Course Description and Prerequisites

A survey of the structure and history of the universe through the sciences of astronomy (space science), geology (earth science), and biology (life sciences). Scientific vocabulary and basic math skills are reviewed and utilized within the course. Forums are also conducted in the areas of the interface between science and Scripture. (This course satisfies the requirements for a Natural Science course.)



### Course Objectives

Upon completion of this course the student should be able to:

- A. Express and evaluate the major scientific theories and discoveries of modern science, demonstrating a working knowledge of inanimate physical forces and scientific terminology.
- B. Recognize and analyze the natural processes that scientists believe have shaped the heavens and the earth.
- C. Articulate rudimentary facts pertaining to scientific discussions of cosmic, geologic and biologic history as proposed by current accepted theories such as the Big Bang, the Nebular Hypothesis, Plate Tectonics and Evolution.
- D. Evaluate the viability of the different ways scientists and theologians have interacted, analyzing the strengths and weaknesses of the solutions they have proposed in the face of difficulties.

## **Required Textbooks**

Spencer, Kirk L., Heaven and Earth; an Orientation in Natural Science. Unpublished, 2016

Spencer, Kirk L., Science and Theology; a compendium. Unpublished, 2014

[The texts will be included as separate pdf files on Canvas within the structure of the course.]

## **Course Requirements and Assignments**

### **Attendance and Participation Grade**

Attendance and participation are vital to learning as part of a classroom experience and so absences should be taken only when absolutely necessary. Excused absences are permitted at the discretion of the professor. Every three instances of either being tardy to class or departing before the end of class will be considered one absence. You will begin the semester with a Participation Grade of 100 points. Consistent attendance and participation in class discussion will maintain the perfect score. Each unexcused absence will deduct 4 points from your participation grade. The lectures are designed for visual learners. The images and video shown will reinforce what is being learned. For this reason, you should not use I-phones or laptops in class. You may look at phones for notifications which will require only a few seconds of distraction at a time. If you are notified of an emergency and need to respond, you can step out of the room. I include these expectations here because refusal to follow this classroom requirement, requiring class time to correct it, will dramatically reduce your participation grade. Beyond your presence and attention in class, it is expected that you will participate in the discussion by sharing your knowledge and experiences, asking questions and volunteering answers when the professor asked questions in class.

Your Attendance and Participation Grade will determine **20%** of your course grade.

### **Reading Grade**

The textbook and assigned reading will be provided for you in Canvas as pdf files in the appropriate modules. You will be assigned weekly reading assignments. You will report the percentage of the reading you have done at the end of each unit of study on Canvas just before you take the Unit Exam. The average of the percentage of all your unit reading will determine your final reading grade.

Your final reading grade will constitute **10%** of the course grade.

### **Exam Grades**

Three exams will be given during the course, one for each of the first three units. Each will include multiple choice and matching questions. These exams will be taken on Canvas and you will be given two attempts at each exam. All will be timed exams so it is expected that you will not search for answers in the text but will take the exams from beginning to end from memory, without looking at the text or

your notes. However, if you have time remaining, once you have finished, you are allowed to look through your notes to find the best answer to the more difficult questions... so it will be good to make a note of which questions you are unsure of, so you can go back to these questions. Remember to not leave any questions blank. Once you have taken the exam the first time, you will be allowed to see the exam and your answers. However, it will not show you the correct answers. Use your access to this test to review for the second attempt at the exam. In this review you can look back at the text and any other source you need to determine which of the remaining answers would be the best. For the best score you should spend time looking at your text and notes and decide which answer is best before you take the exam the second time. Your grade for each unit exam will be the average of the two grades. [If you like your score with the first attempt you do not have to take the exam again.]

The average of your three exam scores will determine **50%** of your course grade.

### **Final Exam**

A comprehensive final exam will be given at the end of the course which will be composed primarily (80%) from questions taken from previous tests. At the end of the final will be several questions taken from the first two chapters of the text over The Scientific Enterprise (Ch. 1) and The History of Science (Ch. 2) with one matching question which will require a very basic understanding of the different views covered in your reading in “Science and Theology.” You will only have one attempt at the final exam so be sure and use your access to the earlier exams to prepare well.

Your score on the final exam will determine **20%** of your course grade.

### **Grade Weight**

Attendance/Participation	(20%)
Reading Grade	(10%)
Exam Grades	(50%)
<u>Final Exam</u>	<u>(20%)</u>
TOTAL:	100%

## **Course/Classroom Policies and Information**

### **ONLINE EXAM PROTOCOL**

When taking exams online, you should take the exam as quickly as possible from memory. After the exam is completed, you may use the time remaining to check and change any answers by searching notes you have taken when preparing for the exam. While you can use your notes or study-outline in this search, you cannot use any other sources. You certainly should not use keyword searches to copy answers from the pdf files of the textbook.

Here is a list of activities which will be considered cheating:

- Talking to someone about the exam to give or get information about the content of the exam.

- Taking or receiving screenshots of the exam questions.
- Using the course manuscripts, or other sources other than your notes or study outline, to find the answer to a question while you are taking the exam. However, you can use the text when preparing to take the exam for the second time. And you can use any notes you take both the first and second time you take the exam.
- Letting someone else take the exam for you or taking the exam for someone else.

### Video Recording

To ensure FERPA compliance when a course is live-streamed or recorded, students can opt out of video recordings by requesting seating in a designated area off camera. Students who sit outside of this area are giving implicit permission to be recorded.

### Class Attendance:

Students should only enroll in courses they are able to attend regularly.

- **On-campus** students are expected to attend class **in person** according to the course syllabus.
- Students enrolled in the **online section** must pay any applicable online course fees.
- Online students are expected to attend class **synchronously** at the scheduled time via the designated video conferencing platform, Zoom, found in the left-hand global menu in Canvas.
- Online students must have their **cameras turned on with sound muted** during class, and actively participate in discussions and activities. In order to be properly identified, students must upload a picture ID to their Canvas Account Profile *prior to the first online meeting*. For instructions on how to upload a profile picture, [click here](#).

### Missed Classes:

- Each instructor may decide how attendance impacts your grade and learning objectives. Details are provided within the course syllabus.
- Students are responsible for catching up on any material missed due to absence or tardiness.
  - Instructors are **not required** to allow make-up work for missed classes.

### Attendance & Financial Aid:

- Students receiving **grants, loans, or scholarships** must meet participation requirements set by the college.
- It is the student's responsibility to:
  - Review relevant sections of the Academic Catalog.
  - Contact the **Financial Aid Office** for details on how attendance affects aid.
  - Understand the consequences of non-participation.

### Census Period Attendance Requirement:

- Though Criswell College does not officially take attendance, it must verify that students **begin their courses** to meet federal aid regulations.
- **During the census period** (first two weeks of a 16-week semester or first week of shorter terms), students must participate in **academically related activities**, or they may be dropped from the course.

### Examples of Qualifying Activities:

- Attending class in person or via live video with the instructor present
- Submitting an assignment, quiz, or exam
- Taking part in assigned tutorials, study groups, or discussion boards
- Having documented communication with the instructor about course content

### Important Note:

Simply logging into Canvas or a Zoom session without participating (e.g., camera off, no interaction) **does not count** as attendance.

### Canvas:

- Criswell College uses Canvas as its web-based Learning Management System (LMS).

- **For online courses** at Criswell College, instructors use Canvas to:
  - Organize course content on a module basis using organizational tools within Canvas
  - Control the timing of course requirements through module control or assignment due dates to ensure that students are engaged for the full length of the semester or term
  - Accept assignments from students only inside the Canvas course (emailed assignments are not acceptable)
  - Provide written feedback on assignments only within Canvas, preferably through Speedgrader
  - Use the Announcement or e-mail feature in Canvas to communicate with the students rather than by broadcasting to a class email listserv outside of canvas
  - Use Zoom in Canvas for all “live” (synchronous) class sessions

**Important Note:**

Students needing assistance with Canvas should contact the Canvas Help Support line at 844-358-6140. Tech support is available at this number, twenty-four hours a day.

## Campus Closure

To ensure the health and safety of students and employees, college administrators may decide it is necessary on rare occasions to close the campus. Once this decision is announced, instructors will contact students to provide further details regarding the campus closure’s impact on those courses. Students are responsible to watch for communication from their instructors and respond appropriately. (Unless otherwise specified by the instructor in this syllabus, this communication will be sent to the student’s Criswell College e-mail account.)

In order to make progress toward the courses’ objectives, instructors have the freedom during most campus closures to require students to participate in activities as alternatives to meeting on campus. An instructor may, for example, hold class remotely (through Zoom) at the scheduled time, provide a recording of a class or presentation for students to watch independently, or assign other activities that students are to accomplish before returning to campus. Students are responsible for accomplishing these alternative activities as well as any course requirements listed in this syllabus during the period of the campus closure. If, during the period of the campus closure, personal circumstances prohibit a student from accomplishing these alternative activities or course requirements and assignment listed in the syllabus during the campus closure, the student is responsible for communicating with the instructor as soon as possible. Instructors will not penalize students who do not have the means to accomplish the alternative activities during the period of the campus’s closure and will work with students whose circumstances during the campus closure prohibited their timely completion of course requirements and assignments in the syllabus.

## Grading Scale

Assigning grade definitions (i.e., above average, average, below average) is optional. Please delete the last column below if not assigning definitions. Additionally, delete these instructions when completing syllabus.

			Grade Definitions (optional)
A	93-100	4.0 grade points per semester hour	
A-	90-92	3.7 grade points per semester hour	
B+	87-89	3.3 grade points per semester hour	
B	83-86	3.0 grade points per semester hour	
B-	80-82	2.7 grade points per semester hour	

C+	77-79	2.3 grade points per semester hour	
C	73-76	2.0 grade points per semester hour	
C-	70-72	1.7 grade points per semester hour	
D+	67-69	1.3 grade points per semester hour	
D	63-66	1.0 grade point per semester hour	
D-	60-62	0.7 grade points per semester hour	
F	0-59	0.0 grade points per semester hour	

## Incomplete Grades

Students requesting a grade of Incomplete (I) must understand that incomplete grades may be given only upon approval of the faculty member involved. An “I” may be assigned only when a student is currently passing a course and in situations involving extended illness, serious injury, death in the family, or employment or government reassignment, not student neglect.

Students are responsible for contacting their instructors prior to the end of the semester, plus filing the appropriate completed and approved academic request form with the Registrar’s Office. The “I” must be removed (by completing the remaining course requirements) no later than 60 calendar days after the close of the term or semester in which the grade was awarded, or the “I” will become an “F.”

## Academic Honesty

Absolute truth is an essential belief and basis of behavior for those who believe in a God who cannot lie and forbids falsehood. Academic honesty is the application of the principle of truth in the classroom setting. Academic honesty includes the basic premise that all work submitted by students must be their own and any ideas derived or copied from elsewhere must be carefully documented.

Academic dishonesty includes, but is not limited to:

- cheating of any kind,
- submitting, without proper approval, work originally prepared by the student for another course,
- plagiarism, which is the submitting of work prepared by someone else as if it were his own, and
- failing to credit sources properly in written work.

## Course Policy on the use of Artificial Intelligence (AI)

(Instructors may use, modify or replace these guidelines as appropriate for their course.)

Examples of AI-related functions you **may not use** without permission:

- Text Generation – You may not use AI to generate text for use in an assignment.
- Outline Generation – You may not use AI to generate an outline for an assignment.

AI-related tools you **may use** without permission:

- Spellcheck and grammar – built into Word, Pages, and Google Docs

- AI re-writing tools – tools that take what you’ve written and help make it clearer, such as what Grammarly offers. However, you must cite Grammarly or other sources in your assignment/paper and submit both original draft of paper and the final paper.
- AI research and summarize – tools that help you find sources to cite, such as the new AI tools built into Logos Bible Software.)

## **Institutional Assessment**

Material submitted by students in this course may be used for assessment of the college’s academic programs. Since programmatic and institutional assessment is done without reference to specific students, the results of these assessments have no effect on a student’s course grade or academic standing at the college. Before submitting a student’s work for this type of assessment, the course instructor redacts the work to remove anything that identifies the student.

## **Institutional Email Policy**

All official college email communications to students enrolled in this course will be sent exclusively to students’ institutional email accounts. Students are expected to check their student email accounts regularly and to respond in an appropriate and timely manner to all communications from faculty and administrative departments.

Students are permitted to setup automatic forwarding of emails from their student email accounts to one or more personal email accounts. The student is responsible to setup and maintain email forwarding without assistance from college staff. If a student chooses to use this forwarding option, he/she will continue to be responsible for responding appropriately to all communications from faculty and administrative departments of the college. Criswell College bears no responsibility for the use of emails that have been forwarded from student email accounts to other email accounts.

## **Disabilities**

Criswell College recognizes and supports the standards set forth in Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and similar state laws, which are designed to eliminate discrimination against qualified individuals with disabilities. Criswell College is committed to making reasonable accommodations for qualifying students, faculty, and employees with disabilities as required by applicable laws. For more information, please contact the Student Services Office.

## **Intellectual Property Rights**

Unless otherwise specifically instructed in writing by the instructor, students must neither materially nor digitally reproduce materials from any course offered by Criswell College for or with the significant possibility of distribution.

## **Research and Writing Standards**

The default writing style for written assignments in Criswell College Courses is the latest edition of *A Manual for Writers of Research Papers, Theses and Dissertations* by Kate Turabian. However, instructors are free to require

alternative writing styles in their courses. These styles include but are not limited to the American Psychological Association (APA), Chicago Manual of Style, Modern Language Association (MLA), and Society of Biblical Literature (SBL) writing guides.

## **Resources and Supports**

Canvas and SONIS: Criswell College uses Canvas as its web-based learning tool and SONIS for student data. Students needing assistance with Canvas should contact the Canvas Help Support line at (844) 358-6140. Tech support is available at this number, twenty-four hours a day. Students needing help with SONIS should contact the Campus Software Manager at [studenttechsupport@criswell.edu](mailto:studenttechsupport@criswell.edu).

Student Services: The Student Services Office exists to foster and encourage success in all areas of life—physical, intellectual, spiritual, social, and emotional. Students are encouraged to reach out for assistance by contacting the office at 214.818.1332 or [studentservices@criswell.edu](mailto:studentservices@criswell.edu). The Student Services Office also works with local counseling centers to ensure that every student has access to helpful mental health resources. More information is located on the college website at [Criswell College Mental Health Resources](#), and students may contact the Director of Student Services if they have any questions.

Wallace Library: Students can access a wide range of academic resources and receive research assistance by contacting or visiting the Wallace Library, located on the second floor of the Education Building.

Login credentials for accessing the library's databases are emailed to students near the beginning of each semester.

For more information or assistance, email the Wallace Library at [library@criswell.edu](mailto:library@criswell.edu) or visit [www.criswell.edu/academics/wallace-library/](http://www.criswell.edu/academics/wallace-library/).

Tutoring Center: Students are encouraged to consult with tutors to enhance their skills and build confidence. All tutors are recommended by faculty to ensure they are qualified to support the student body. To meet with a tutor, students can schedule an appointment through Calendly at <https://calendly.com/criswell-tutoringcenter>. The Tutoring Center is located in room E203 of the Education Building.

For questions, email [tutoringcenter@criswell.edu](mailto:tutoringcenter@criswell.edu).

## **Course Outline/Calendar**

### **Weekly Session**

### **Assignment**

## **Unit 1: SPACE** **SPACE SCIENCE (Astronomy)**

### **Week 1 (August 18-22)**

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Introductions and Syllabus  
Perspective Earth's Age & Evolution  
Importance of Natural Science

Read H&E<sup>1</sup>: Scientific Enterprise Ch. 1  
Begin to Read S&T<sup>2</sup>: Militarism: Naturalism (pp. 1-46)  
Begin Reading H&E: Astronomy Ch. 3

## **Deep Space**

### **Week 2 (August 25-29)**

Constellations, Electromagnetism, Telescopes  
Deep Space, Quasars, Blackholes, Galaxies, Nebulae

Read H&E: History of Science Ch. 2  
Finish Reading H&E: Astronomy Ch. 3

## **Solar System**

### **Week 3 (September 1-5)**

Planet Formation, Planets, Asteroid Belt, Comets,  
Sun, Sunspots, Solar Flares, Moon

Study H&E: Astronomy Ch. 3

### **Week 4 (September 8-12)**

**ASTRONOMY Unit Review**

Prepare for Astronomy Unit Exam

## **TAKE SPACE UNIT EXAM**

## **UNIT 2: OCEANS**

### **EARTH SCIENCE (Meteorology, Oceanography and Structural Geology)**

#### **Atmosphere (Meteorologists study the ocean of air)**

##### **Week 5 (September 15-19)**

Magnetosphere, Meteorites, Atmospheric Layers  
Movement of the Atmosphere, Cloud Forms & Storms

Begin Reading H&E (Geology: Oceans) Ch.4  
Begin Reading S&T Militarism: Scientific Creationism

##### **Week 6 (September 22-26)**

Hurricanes, Tornado Forms, Rating and dangers

Read Heaven and Earth (Geology: Oceans) Ch.4

##### **Week 7 (September 29 – October 3)**

Infamous Tornadoes & How to Survive, Lightning

Read S&T Militarism: Scientific Creationism

#### **Hydrosphere (Oceanographers study the ocean of water)**

Tides and Currents

#### **Lithosphere (Seismologists study the ocean of rock that make-up the Earth's interior)**

##### **Week 8 (October 6-10)**

Earthquake Waves, Ratings and Damage  
Tsunamis, Plate Tectonics, Wilson Cycle

Finish Reading H&E (Geology: Oceans) Ch.4  
Finish Reading S&T Militarism: Scientific Creationism

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### **Week 9 STUDENT DEVELOPMENT WEEK (October 13-17) Study H&E (Geology: Oceans) Ch.4**

#### **Volcanoes (Volcanologists study the rivers of rock flowing out of the ocean of rock)**

##### **Week 10 (October 20-24)**

Shield Volcanoes, Strata Volcanoes, Volcanic Dangers

Study Heaven and Earth (Geology: Oceans) Ch.4  
Prepare for Oceans Unit Exam

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<sup>1</sup> Abbreviation for the textbook titled "Heaven and Earth." This text is supplied as a pdf in the modules of Canvas.

<sup>2</sup> Abbreviation for manuscript titled "Science and Theology." This text is supplied as a pdf in the modules of Canvas.

**TAKE OCEANS UNIT EXAM**

**UNIT 3: RIVERS**

**EARTH SCIENCE (Geomorphology)**

**RIVERS OF WATER** (Hydrologists study rivers of water)

**Week 11** (October 27-31)

Discharge, Stream Flow, Sediment Transport, Deltas      Begin Reading H&E (Geology: Rivers) Ch. 4  
Meandering, Flooding, Underground Water, Caverns      Read Concordism: Progressive Creationism

**RIVERS OF ICE** (Glaciologists study rivers of ice)

**Week 12** (November 3-7)

Zone of Flow & Fracture, Valley Glaciers, Calving      Finish Reading H&E (Geology: Rivers) Ch. 4  
Continental Glaciers, Ice Ages      Read Concordism: Progressive Creationism

**RIVERS OF SAND and RIVERS OF ROCK**

**Week 13** (November 10-14)

Waves, High & Low Energy Beaches, Dunes      Study H&E (Geology: Rivers) Ch. 4  
Creep, Mass Wasting and Avalanches      Prepare for Rivers Unit Exam

**TAKE RIVERS UNIT EXAM**

**UNIT 4: LIFE**

**LIFE SCIENCE (Biology)**

**BASICS OF LIFE** (Microbiologists study life smaller than we can see)

**Week 14** (November 17-21)

Life from Macro to Micro, Life's Building Blocks      Begin Reading H&E (Historical Science) Ch. 6  
Principles & Laws of Life, Not So Simple Simple Cell      Read Heaven & Earth (Life Science: Biology) Ch. 5

**THANKSGIVING FALL BREAK** (November 24-27) Read Heaven & Earth (Life Science: Biology) Ch.5

**LIVING BODIES** (Anatomists study the structure of bodies)

**Week 15** (December 1-5)

Biological Systems and Senses      Read Heaven and Earth (Historical Science) Ch. 6  
Read Science & Theology  
Separatism: Prochronic View, Gap Theory, Local  
Creation View and Religious Only View  
(pp. 96-to the end)

Prepare for Final Exam

**Week 16** (December 8-12)

**FINAL EXAM**

[Optional Exam over Historical Science to replace lowest grade]

## **Extra Credit Projects**

(Points added to total points not to final average)

### **DALLAS**

Perot Museum of Natural History	5pts
Dallas World Aquarium	5pts
Dallas Arboretum	5pts
The Rock Barrel Rock Shop	5pts

### **FORT WORTH ARTS DISTRICT**

Japanese Garden	5pts
Museum of History and Science	5pts
Dallas Zoo or Ft. Worth Zoo	5pts
Caldwell Zoo (Tyler)	10pts