AU PHYS 110 Astronomy
WAU PHYS 150 Descriptive Astronomy
Consortium of Adventist Colleges and Universities

Self-Paced Full Term Courses
This is a Self-Paced Full Term course which follows the Andrews semester schedule. Self-Paced Full Term courses have four important dates: 1) a start date, 2) a midterm completion date, 3) a final completion date, and 4) a course completion date. Please note that all module prior to the midterm must be completed BEFORE the midterm and all modules between the midterm and final must be completed BEFORE the final.

Instructor Contact
Please refer to course in LearningHub for the teacher contact information.

Communication with the Instructor
It is important to remember that while the Internet is available 24 hours a day, your instructor is not. You can expect that your instructor will respond to e-mail message to you within 2 business days during the week and may not be available to respond on weekends.

Other Assistance

<table>
<thead>
<tr>
<th>Assistance</th>
<th>Contact</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username and password assistance</td>
<td><a href="mailto:helpdesk@andrews.edu">helpdesk@andrews.edu</a></td>
<td>(269) 471-6016</td>
</tr>
<tr>
<td>Enrollment and withdrawal questions</td>
<td><a href="mailto:sderegister@andrews.edu">sderegister@andrews.edu</a></td>
<td>(269) 471-6323</td>
</tr>
<tr>
<td>Technical assistance with online courses</td>
<td><a href="mailto:dlit@andrews.edu">dlit@andrews.edu</a></td>
<td>(269) 471-3960</td>
</tr>
<tr>
<td>Exam requests and online proctoring</td>
<td><a href="mailto:sdeexams@andrews.edu">sdeexams@andrews.edu</a></td>
<td>(269) 471-6566</td>
</tr>
<tr>
<td>Distance Student Services - any other questions</td>
<td><a href="mailto:sdestudents@andrews.edu">sdestudents@andrews.edu</a></td>
<td>(269) 471-6566</td>
</tr>
</tbody>
</table>

Part 1: Course Information

Course Description

Andrews University
Exploring the cosmic environment—the solar system, stars and their development, star clusters, the interstellar medium, galaxies and large-scale features of the Universe. Includes a distance laboratory component and meets the Andrews General Education Physical Science requirement. Does not apply to a major or minor.

Course Prerequisites

Andrews University
MPE P2 or MATH 145 or 166 or STAT 285 or equivalent.

Course Learning Outcomes

- To convey an appreciation of God’s creativity and power in designing a universe filled with beauty and capable of sustaining life.
- To spark a life-long interest in astronomy.
- To develop an appreciation for the merits and limitations of the methods of science. Contrasts between science and Pseudoscience and Astrology will be drawn. Our dynamic understanding of the Universe will be especially
emphasized through historical example. Measurement uncertainties inherent in astronomy will be experienced first-hand through laboratory experiments analyzing astronomical data.

- To highlight the appropriate ways in which science informs Christian faith.
- To convey a sense of the scale and grandeur of the Universe and an appreciation of our purpose for being.

**Required Text/Material**

Astronomy Lab Kit as listed on the online bookstore.

**The software, Starry Night, is used for labs and comes with the new textbook. If purchasing a used textbook, please make sure it comes with a copy of this software.

**Lab Materials:**
- Bathroom Scale (purchase on your own)
- Stopwatch (purchase on your own)
- Lab kit (purchased through bookstore only – [www.andrews.edu/bookstore](http://www.andrews.edu/bookstore))

**NOTE:** Purchase textbooks through any online bookstore, such as [amazon.com](http://amazon.com), which can deliver within 2 days. If you need to use financial aid to purchase textbooks, order through [bookstore.andrews.edu](http://bookstore.andrews.edu), then email [sdestudents@andrews.edu](mailto:sdestudents@andrews.edu) to assist with the payment from your account and shipping from the campus Bookstore.

**Credit Hour and Commitment**
This course is offered for 4 semester credits; therefore it is expected that you will spend 180 hours total on this course. Suggested schedule(s) to accomplish this work are included in this syllabus.

**Part 2: Course Methods and Delivery**

**Methods of Instruction**
Methods of instruction include assigned readings from the textbook and the course material, journals, assignments, labs, a reaction paper, a presentation, and two exams. Regular participation in the course is essential to good performance.

**Course/Technical Requirements**
- Internet connection (DSL, LAN, or cable connection desirable).

**LearningHub Access**
This course is delivered online through LearningHub at [http://learninghub.andrews.edu](http://learninghub.andrews.edu)

Your username and password are your Andrews username and password. You need to activate your username and password to access LearningHub.
Please do this online here:
https://vault.andrews.edu/vault/pages/activation/information.jsp if you haven’t already. If you need assistance, call or email us: (296) 471-6016 or helpdesk@andrews.edu.

If you need technical assistance at any time during the course, or to report a problem with LearningHub, please email dlit@andrews.edu or call (269) 471-3960.

**Part 3: Course Requirements**

**Important Note:** Activity and assignment details will be explained in detail within each learning module. If you have any questions, please contact your instructor.

**Assessment Descriptions**

**Textbook Readings:** Read the assigned section of the textbook. Though you may feel somewhat overwhelmed by the volume of material from this first pass, the goal of the course is not rote memorization of facts. As you proceed, you will find certain ideas consistently emphasized in the text, the lessons, and the homework. Focus on those key principles.

**Lesson Readings:** Carefully read the lessons, especially any detailed information or calculational hints. I have deliberately included specific exam preparation material in the lessons.

**Assignments/Homework (20% of your grade):** Answer the on-line homework questions. Again, many of the exam questions are related to questions you will have encountered in your homework assignments. Your answers to homework questions need not be long-winded and exhaustive. Usually a couple of key ideas with the appropriate terminology will suffice.

**Laboratories (20% of your grade):** As with any science, astronomy is based on observations of the universe. Some of these observations are made within a laboratory, but many are carried out on very distant objects using telescopes, etc. Apply your knowledge with the on-line laboratories found each week on the LearningHub content page. Each experiment is assigned in conjunction with the corresponding course reading material.

**Journals (5% of your grade):** Please submit a 3-4 paragraph response to the questions in the dropbox (links on the content page). This is a time to reflect and think on the things you have learned during the week.

**Reaction Paper (20 pts; 5% of your grade):** You are required to read one article, book chapter or essay relating faith and astronomy and write a two page reaction paper based on your reading. First, summarize the material from your reading and then write your response. For full credit, the paper should include references to at least three sources. Submit your paper as a Word document for grading and plagiarism checks. Details on the style of the paper may be found at http://www.ccc.commnet.edu/mla/index.shtml and a sample paper may be viewed at http://www.bedfordstmartins.com/hacker/pdf/chicago.pdf. A list of potential articles, book chapters, and web-sites are included at the end of this syllabus. You may choose your own topic if you wish, but should check with the instructor first. If you are uncomfortable writing about the relationship between faith and astronomy, you may pursue a topic relating philosophy and astronomy. The rubric for the reaction paper is found below.
**Presentation (30 pts; 5% of your grade):** Students will summarize the conclusions of their reaction paper in a brief (approximately 10 minute presentation). As a distance-learning student, you will need to videotape your presentation using either a digital video camera, a webcam or a cell phone and upload the video file here for the instructors evaluation. Take pride in presenting your thoughts and the rubric below will be used to evaluate your presentation.

**Rubrics**

**Reaction Paper**

<table>
<thead>
<tr>
<th></th>
<th>Outstanding - 5</th>
<th>Commendable - 3</th>
<th>Acceptable - 1</th>
<th>Not Acceptable - 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>Clearly states essential question and position</td>
<td>Clearly states question and position</td>
<td>States question and position</td>
<td>Fails to state essential question or position</td>
</tr>
<tr>
<td><strong>Support: Development</strong></td>
<td>Thorough, accurate content that relates to topic and supports position, logical sequence of arguments</td>
<td>Accurate content helps support position</td>
<td>Content related to topic</td>
<td>Lacking in Content</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Strong concluding paragraph, summarizes and restates position and highlights of supporting data</td>
<td>Concluding paragraph restating important points</td>
<td>Concluding paragraph</td>
<td>No concluding paragraph</td>
</tr>
<tr>
<td><strong>Mechanics</strong></td>
<td>Correct grammar, spelling and diction</td>
<td>Few errors in written English</td>
<td>Generally correct English</td>
<td>Many grammatical or spelling errors</td>
</tr>
</tbody>
</table>

**Presentation**

<table>
<thead>
<tr>
<th></th>
<th>Outstanding - 5</th>
<th>Commendable - 3</th>
<th>Acceptable - 1</th>
<th>Not Acceptable - 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>Powerfully introduces the topic and essential question</td>
<td>Clearly introduces the topic and essential question</td>
<td>Introduces the topic and essential question</td>
<td>Does not introduce the essential question</td>
</tr>
<tr>
<td><strong>Appearance Rapport</strong></td>
<td>Confident, engaging, at ease</td>
<td>Some confidence, engagement and ease</td>
<td>Adequate engagement</td>
<td>Appearance or gestures distract</td>
</tr>
<tr>
<td><strong>Organization and Focus</strong></td>
<td>Material is clearly focused, logical sequencing, timing between 8 and 10 minutes</td>
<td>Material is focused, logical with timing between 8 and 10 minutes</td>
<td>Clear introduction and conclusion and within 8 to 10 minutes duration</td>
<td>Logical sequence missing or unclear. Presentation less than 8 minutes and greater than 10 minutes</td>
</tr>
<tr>
<td><strong>Information Content</strong></td>
<td>Information accurate, concise and interesting. Details and examples are used to make information more meaningful</td>
<td>Information accurate and relevant, details and examples are used</td>
<td>Information covers major issues related to topic</td>
<td>Information is inaccurate with important data missing.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>Conclusion answers the essential question and summarizes the presenters informed opinion</td>
<td>Conclusion addresses the essential question</td>
<td>Conclusion summarizes thoughts of presenter</td>
<td>Conclusion does not address the essential question and the presenter expresses no opinion</td>
</tr>
<tr>
<td><strong>Visual Aids</strong></td>
<td>Skillfully executed visual aids are employed which enhance arguments and present evidence</td>
<td>Competently prepared visual aids are employed</td>
<td>Visual aids are employed</td>
<td>Poor-quality Visual aids distract from issue</td>
</tr>
</tbody>
</table>
Materials Used in the Labs
The following items are used in the lab assignments.
LAB 1: Measurement
  • Measuring Tape
  • Microsoft Excel (or Libre Office)
LAB 2: Celestial Globe
  • Starry Night Software
LAB 3: Size of Earth
  • Starry Night Software
LAB 4: Distances and Sizes in Astronomy
  • Microsoft Paint (Or alternative for Mac)
LAB 5: Drawing Ellipses
  • Paper
  • Cardboard
  • Thumb Tacks (2)
  • String
  • Camera/Scanner
  • Calculator (recommended)
LAB 6: Mercury Orbit
  • Starry Night Software
  • Protractor
  • Graph Paper (Provided if Printed out)
  • Printer
LAB 7: Mass of Jupiter
  • Starry Night Software
LAB 8: Acceleration Due to Gravity
  • Provided Images
  • Microsoft Paint
  • Microsoft Excel
  • Stop Watch
  • Nut/Washer
  • String
  • Ruler
LAB 9: Spectra
  • Microsoft Excel
LAB 10: Lenses and Telescopes
  • The Lenses (4 cm and 12 cm)
LAB 11: Radioactivity
  • 100 Pennies
  • Microsoft Excel (Or a graph with a camera)
LAB 12: Height of Lunar Mountain
  • Microsoft Paint
LAB 13: Moon
  • Starry Night Software
LAB 14: Solar Rotation
  • Microsoft Paint
LAB 15: Blackbody Radiation
  • Microsoft Excel
LAB 16: Stellar Properties
  • Nothing
LAB 17: HR Diagram
Exams
The midterm exam is worth 20% of your grade. You are allowed 120 minutes to complete this exam. The final exam is worth 25% of your grade. You are allowed 120 minutes to complete this exam.

All exams in this course require proctoring. Students living outside of the United States must schedule their exams to be proctored online through the Testing Center. Students living in the United States may choose online or local proctoring. Appointments for proctoring in or online through the Testing Center are set up online at calendly.com/sde-exams/online.

For local proctoring, complete the exam request form linked in the course space to enter proctor information. Please do so two weeks before each exam deadline to allow adequate time for proctor approval. Approved local proctors include university, college or school faculty and teachers, student service workers, advisors, counselors and librarians, as well as educational, military, and workplace testing centers. Have the proctor’s full name, position/title, employer name, phone and email available to fill in on the exam request form.

Note that an exam code is never released to the student, and cannot be sent to a proctor who has the same address as the student unless the address is known to be that of a school or mission facility. All students must present photo identification at the start of each exam session.

If you cannot take your exam by the deadline date, email specific reasons and your recovery plan to your instructor before the deadline. Your exam cannot be proctored after the exam deadline without email or phone approval directly from the instructor to the Testing Center (sdeexams@andrews.edu or 269-471-6566). The Testing Center will then work with a local proctor if needed.

No exam is returned to the student. Instructor feedback on exams prior to the final exam will be provided to aid studying for future exams.

For more details on taking exams and how online proctoring works, please see www.andrews.edu/distance/students/exams.html
<table>
<thead>
<tr>
<th>Module</th>
<th>Lessons</th>
<th>Readings</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro</td>
<td>Introduction &amp; Orientation</td>
<td>Orientation&lt;br&gt;Writing Expectations</td>
<td>Submit: Schedule&lt;br&gt;Tell About Me&lt;br&gt;Academic Honesty</td>
</tr>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Read Syllabus&lt;br&gt;Read Why Study Astronomy&lt;br&gt;Read Introductory Lesson&lt;br&gt;Watch Introductory Lecture</td>
<td>Preview Assignment Journal 1</td>
</tr>
<tr>
<td>2</td>
<td>Cycles of the Sky</td>
<td>Read Lesson 1&lt;br&gt;Read <em>Explorations</em>, Chapter 1 pp. 14 - 37, Cycles of the Sky&lt;br&gt;Watch Lecture 1</td>
<td>Labs 1 &amp; 2 Assignment 1 Journal 2</td>
</tr>
<tr>
<td>4</td>
<td>Newton's Laws</td>
<td>Read Lesson 3&lt;br&gt;Read <em>Explorations</em>, Chapter 3 pp. 72 - 87, Gravity and Motion&lt;br&gt;Watch Lecture 3</td>
<td>Labs 7 &amp; 8 Assignment 3 Journal 3</td>
</tr>
<tr>
<td>5</td>
<td>Light, Atoms and Telescopes</td>
<td>Read Lesson 4&lt;br&gt;Read <em>Explorations</em>, Chapter 4 - 5 pp. 88 - 145, Light and Atoms and Telescopes&lt;br&gt;Watch Lectures 4, 4a, 4b</td>
<td>Labs 9 &amp; 10 Assignment 4 Journal 4</td>
</tr>
<tr>
<td>6</td>
<td>Earth, Moon and Time</td>
<td>Read Lesson 5&lt;br&gt;Read <em>Explorations</em>, Chapter 6 – 7 pp. 146 - 199, The Earth and Moon&lt;br&gt;Watch Lectures 5, 5a, 5b, 5c</td>
<td>Labs 11 – 13 Assignment 5 Journal 5</td>
</tr>
<tr>
<td>7</td>
<td>The Solar System</td>
<td>Read Lesson 6&lt;br&gt;Read <em>Explorations</em>, Chapter 8 pp. 200 – 223, Survey of the Solar System&lt;br&gt;Watch Lectures 6, 6a, 6b, 6c, 6d</td>
<td>Assignment 6 Journal 6</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Midterm Exam - Due on Thursday June 20, by 11:59 PM</td>
<td></td>
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<tr>
<td>9</td>
<td>The Sun</td>
<td>Read Lesson 7&lt;br&gt;Read <em>Explorations</em>, Chapter 12 pp. 304 – 327, The Sun, Our Star&lt;br&gt;Watch Lecture 7</td>
<td>Lab 14 Assignment 7 Journal 7</td>
</tr>
<tr>
<td>10</td>
<td>Stars</td>
<td>Read Lesson 8&lt;br&gt;Read <em>Explorations</em>, Chapter 13 pp. 328 – 359, Measuring the Properties of Stars&lt;br&gt;Watch Lecture 8</td>
<td>Labs 15 – 17 Assignment 8 Journal 8</td>
</tr>
<tr>
<td>11</td>
<td>Stellar Evolution</td>
<td>Read Lesson 9&lt;br&gt;Read <em>Explorations</em>, Chapter 14 pp. 360 – 389, Stellar Evolution&lt;br&gt;Watch Lecture 9</td>
<td>Assignment 9 Journal 9</td>
</tr>
<tr>
<td>12</td>
<td>Stellar Death</td>
<td>Read Lesson 10&lt;br&gt;Read <em>Explorations</em>, Chapter 15 pp. 390 – 411, Stellar Remnants&lt;br&gt;Watch Lecture 10</td>
<td>Assignment 10 Assignment 11 Journal 10</td>
</tr>
<tr>
<td>13</td>
<td>Milky Way Galaxy</td>
<td>Read Lesson 11&lt;br&gt;Read <em>Explorations</em>, Chapter 16 pp. 412 – 443, The Milky Way Galaxy&lt;br&gt;Watch Lecture 11</td>
<td>Assignment 12</td>
</tr>
<tr>
<td>14</td>
<td>Galaxies</td>
<td>Read Lesson 12&lt;br&gt;Read <em>Explorations</em>, Chapter 17 pp. 444 – 479, Galaxies. Part I: Ordinary Galaxies&lt;br&gt;Watch Lecture 12</td>
<td>Assignment 13</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>Journal 12&lt;br&gt;Reaction Paper&lt;br&gt;Final Presentation</td>
</tr>
<tr>
<td>16</td>
<td>Cosmology</td>
<td>Read Lesson 12&lt;br&gt;Read <em>Explorations</em>, Chapter 17 pp. 444 – 479, Galaxies. Part I: Ordinary Galaxies&lt;br&gt;Watch Lecture 12</td>
<td>Lab 18 Assignment 13 Journal 11</td>
</tr>
</tbody>
</table>

**Schedule with start, midterm, final and completion dates in RED.**

**Page 8**
Completing Assignments
All assignments for this course will be submitted electronically through LearningHub unless otherwise instructed.

Part 4: Grading Policy

Graded Course Activities

<table>
<thead>
<tr>
<th>Percent %</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>Journals 1-12</td>
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<tr>
<td>20</td>
<td>Assignments 1-18</td>
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<tr>
<td>20</td>
<td>Labs 1-18</td>
</tr>
<tr>
<td>20</td>
<td>Midterm Exam</td>
</tr>
<tr>
<td>25</td>
<td>Final Exam</td>
</tr>
<tr>
<td>5</td>
<td>Reaction Paper</td>
</tr>
<tr>
<td>5</td>
<td>Presentation</td>
</tr>
<tr>
<td>100</td>
<td>Total Percent Possible</td>
</tr>
</tbody>
</table>

Viewing Grades in LearningHub
- Click into the course.
- Click on the Grades link in the Settings Box to the left of the main course page.

Letter Grade Assignment

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92%</td>
</tr>
<tr>
<td>B+</td>
<td>88-89%</td>
</tr>
<tr>
<td>B</td>
<td>83-87%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82%</td>
</tr>
<tr>
<td>C+</td>
<td>78-79%</td>
</tr>
<tr>
<td>C</td>
<td>73-77%</td>
</tr>
<tr>
<td>C-</td>
<td>70-72%</td>
</tr>
<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>0-59%</td>
</tr>
</tbody>
</table>

Part 5: Course Policies

Withdrawal and Incomplete Policies
The current withdrawal policy can be found online at https://www.andrews.edu/distance/students/gradplus/withdrawal.html. The incomplete policy is found online at http://www.andrews.edu/weblmsc/moodle/public/incompletes.html.
Maintain Professional Conduct Both in the Classroom and Online

The classroom is a professional environment where academic debate and learning take place. Your instructor will make every effort to make this environment safe for you to share your opinions, ideas, and beliefs. In return, you are expected to respect the opinions, ideas, and beliefs of other students—both in the face-to-face classroom and online communication. Students have the right and privilege to learn in the class, free from harassment and disruption.

Academic Accommodations

Students who require accommodations may request an academic adjustment as follows:

1. Read the Andrews University Disability Accommodation information at https://www.andrews.edu/services/sscenter/disability/.
2. Download and fill in the disability form at http://www.andrews.edu/services/sscenter/disability/accommodationsreqform.pdf. Preferably type answers. To save a digital copy, 1) print to file and save or 2) print and scan. Email the completed form and disability documentation (if any) to success@andrews.edu or fax it to (269) 471-8407.
3. Email sdestudents@andrews.edu to inform the School of Distance Education that a disability has been reported to Student Success.

Commitment to Integrity

As a student in this course, and at the university, you are expected to maintain high degrees of professionalism, commitment to active learning, participation in this course, and integrity in your behavior in and out of this online classroom.

Commit to Excellence

You deserve a standing ovation based on your decision to enroll in, and effectively complete this course. Along with your pledge of “commitment to Integrity” you are expected to adhere to a “commitment to excellence.” Andrews University has established high academic standards that will truly enhance your writing and communication skills across the disciplines and in diverse milieu with many discourse communities in the workplace.

Honesty

Using the work of another student or allowing work to be used by another student jeopardizes not only the teacher-student relationship but also the student’s academic standing. Lessons may be discussed with other students, tutors may help to guide a student’s work, and textbooks, encyclopedias and other resource materials may be used for additional assistance, but the actual response must be the student’s own work.

Exams must be completed in the presence of an approved supervisor without the assistance of books, notes, devices or outside help unless otherwise specified in the exam directions. The student should have no access to the exam either before or after it is taken. A student who gives information to another student to be used in a dishonest way is equally guilty of dishonesty.

Any violation of this policy will be taken before the Higher Education Academic and Curriculum Committee for appropriate punitive action.
Part 6: Resources for Paper and Presentation

The following resources deal with topics suitable for your paper and presentation. Choose a topic from one source listed below. Your reaction paper and presentation will be based on information and ideas gleaned from the source. If you wish to pursue a topic not covered by any of the sources listed below, please contact the professor and discuss your plans in advance.

**Videos**

1. Galileo’s Battle for the Heavens - Biography of Galileo
2. A Private Universe:
   a. Preconceived notions interfere with learning
   b. The Doomsday Asteroid
   c. Asteroids that could demolish the earth
   d. Show Me God - Modern Cosmology provides evidence for God
4. Science and Religion: An overview (are religion and science at war?)
5. Science and Religion: Let there be light and the big bang
6. Science and Religion: Creation and evolution
7. Beyond the Postmodern Mind: Do materialistic values of science lead to loss of meaning?
8. Faith and Reason: Interviews with scientists for views on science and philosophy
9. Science and the Spirit:
10. Soul:
    a. Part I: Challenges to Big Bang and the creation of life
    b. Part II: Knowledge of the Natural World has failed to answer life’s important questions.
    c. Part III: Science cannot decipher all aspects of the human mind
11. Facts of Faith: experiments that teach about God (Elementary School Level)

**Books**

“Seventh-day Adventists Believe: A Biblical Exposition of the 27 fundamental Doctrines”, General Conference of Seventh-day Adventists, Ministerial Department, 1988. You must interview a local pastor about how flexible (or inflexible) these beliefs are. You may chose to focus on belief #6, Creation.


Ch. 1: Martian Rocks
Ch. 7: The Bible and the Big Bang
Ch. 8: Evidences for Design
Ch. 9: Alternative Explanations for Design
Ch. 11: Is the Gospel Logical?


“Miracles”, Chapter 3 (The Self-Contradiction of the Naturalist)

“Miracles, Chapter 8 (Miracles and the Laws of Nature)


“Rare Earth”, Peter Ward and Donald Brownlee, Chapter 12 (Assessing the Odds), Copernicus Books, 2004.

“A Brief History of Time”, Stephen Hawking, Chapter 8 (The Origin and Fate of the Universe), Bantam, 1988.


Web Sites
http://www.reasons.org/articles/design-and-the-anthropic-principle
Hugh Ross, Design and the Anthropic Principle
Anthropic Principle
http://www.leaderu.com/truth/1truth15.html

People
Interview a theologian about how modern astronomy informs his faith or interview an astronomer or physicist about the appropriateness of a relationship between faith and science. You may use the phone or email to conduct interviews.
Articles


