

# Love and the Cosmos



Trinitarian Perspectives on Science  
with T.F. Torrance and C.S. Lewis

“Orion’s high in the southwest sky,  
you’re bound to move on and so am I...  
We’re given love and love must be returned;  
that’s all the bearings that you need to learn.  
See how the starwheel turns.”

*Bruce Cockburn, “Starwheel,” 1975*

“I want to know what love is...”

*Foreigner, 1984*

“For God so loved the world that he gave his only begotten Son...” (John 3:16)

“For in him **all things** were created: things **in heaven** and **on earth**, **visible** and **invisible**, whether thrones or powers or rulers or authorities; **all things** have been created through him and for him. He is before **all things**, and in him **all things** hold together. And he is the head of the body, the church; he is the beginning and the firstborn from among the dead, so that in everything he might have the supremacy. For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself **all things**, whether things **on earth** or things **in heaven**, by making peace through his blood, shed on the cross.” (Colossians 1:15–20 NIV)

Cover design by Michael Barfield. *Inset painting*: “Child’s Scarlet Christ,” by Michael Barfield.  
*Astrophotograph*: Orion, <http://www.astronomytrek.com/step-4-interesting-facts-about-orion/>.

*About Cockburn*: <https://kerrysloft.com/art-music-lit-2/bruce-cockburn-love-in-a-broken-world/>





**GRACE COMMUNION  
SEMINARY**

## **TH504 • Trinitarian Perspectives on Faith and Science**

### **COURSE PACKET**

• Syllabus • Appendices • Weekly Schedules •

CURRENTLY BEING REVISED FOR SPRING 2021

Welcome to the Course Packet for TH504. It consists of three parts: the Syllabus, Appendices, and Weekly Schedules.

**Syllabus:** Read this first for an overview of the course.

**Appendices:** These contain general information about the course, detailed explanations of assignments and step-by-step instructions for completing them, and various supplemental materials.

**Weekly Schedules:** These pages provide a checklist of topics, readings, and other information about assignments for each regular week of the course.

Read the Syllabus and the Appendices in their entirety before the end of the first week of class. Complete the Orientation Assignments for Week 1 as soon as possible.

In the [Table of Contents](#), click on **page numbers** to jump to any section. Except in Tables, cross-references to Appendices also are usually hyperlinked.

*Note: In this course, there is a lot of reading, writing, and thinking! Indeed, a lot of thinking-out-loud while writing and interacting with others. If you do not have time to read the course packet, this course is probably not for you. If you do read this course packet in its entirety, then you will know whether you will like this course. If you have qualms, jump to Appendix W, "Top Ten Things to Know About This Course." If you find reading or writing difficult, this course will be a great opportunity to allocate extra time and effort to work on those skills. All of the quizzes allow multiple attempts, and you can get started on any week's assignments a week early to give yourself extra breathing room.*

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## TABLE OF CONTENTS

<b>Syllabus</b>	<b>7</b>
Instructor: Kerry V. Magruder	7
GCS Mission Statement	7
Course description	7
Required Readings	8
Recommended Reading	9
Student Learning Outcomes	10
Tentative Course Schedule	12
Course Requirements and Assignments	14
Semester Total Points	14
Weekly Assignments	14
Course Assignments - Comprehensive Summary	18
<b>Appendices</b>	<b>20</b>
Appendix A: Grading Standards	21
Appendix B: Course Policies	23
Appendix C: Goals, Objectives, and Outcomes	25
GCS Mission Statement	25
GCS Student Learning Outcomes (SLO)	25
Program Objectives	25
TH504 Course Objectives	25
Appendix D: Top 10 Lists for Further Reading	27
Torrance Top 10 "Primary"*	29
Lewis Top 10 "Primary"*	30
Torrance Top 10 "Secondary"	32
Lewis Top 10 "Secondary"	33
Appendix E: Study Tips	34
Reading Well	34
Writing Well	36
Time Management	39

Appendix F: Estimated Workload	41
Appendix G: Additional Readings – Explanation and Schedule	46
Semester Readings at a Glance (provisional)	52
Appendix H: Seminar Videos – Combined Outline	54
Appendix I: Gradebook Declarations	59
Appendix J: Honor Code	60
Appendix K: How to Avoid Plagiarism	62
Appendix L: Course Etiquette	64
Appendix M: Academic Freedom	66
GCS Statement on Academic Freedom	68
Appendix N: Weekly Assignments – Overview	69
Seminars: Perspectives and Applications	70
Optional: Doxological Science Activity	71
Forums	71
Hours per Week	74
Got Rhythm? Schedules A and B and C...	74
Appendix O: The Weekly Perspective Seminars	76
Appendix P: Seminar Additional Readings	79
Write a Notebook Entry, Part 1: Seminar Notes Feedback	80
Write a Notebook Entry, Part 2: Ministry Reflection	83
Notebook Gradebook Declaration	83
Appendix Q: The Weekly Application Seminar	84
Appendix R: The Weekly Last Words Assignment	86
Appendix S: Conversations with Creation Workers	87
Plan the Conversation	87
Conduct the Interview	88
Post a Reflection on the Conversation	89
Appendix T: Website Tasks Assignments	92
Appendix U: Love and the Cosmos	94
Orientation Week	94
Weekly Assignment	94



Final Paper	94
Appendix V: Optional Extra-Credit Book Essays	98
Appendix W: Top 10 Things to Know About This Course	100
Appendix X: How to Get a Date	110
Appendix Y: General Timelines	112
Ancient Timeline	113
Medieval Timeline	114
Early Modern Timeline	115
Modern Timeline	116
Appendix Z: Word Counts and Spell Checking	118
About the Instructor	120
<b>Weekly Schedules</b>	<b>123</b>
Semester Overview	124
Week 1: Orientation	125
Week 2: Thinking Theologically	130
Week 2 Perspective: Thinking Theologically	131
Week 2 Readings: Christian Theological Instinct	133
Week 2 Application: The Flat Earth Myth	134
Week 2: Love and the Cosmos	136
Week 2: Website Task #1	136
Week 2: Last Words	136
Week 3: Language and Reality	137
Week 3 Perspective: Language and Reality	138
Week 3 Readings	140
Week 3 Application: The Galileo Affair	142
Week 3: Love and the Cosmos	144
Week 3: Website Task #2	145
Week 3: Last Words	145
Week 4: Knowing Kata-physin	146
Week 4 Perspective: Knowing Kata Physin	147
Week 4 Readings	148
Week 4 Application: Interdisciplinary Relations	150

Week 4: Love and the Cosmos	152
Week 4: Conversation Assignment	152
Week 4: Last Words	152
<b>Week 5: Being and Relation</b>	<b>153</b>
Week 5 Perspective: Being and Relation	154
Week 5 Readings	155
Week 5 Application: Relational Physics (& Genesis 1)	157
Week 5: Love and the Cosmos	158
Week 5: Conversation Assignment	158
Week 5: Last Words	158
<b>Week 6: Divine Freedom and Contingent Order</b>	<b>159</b>
Week 6 Perspective: Divine Freedom and Contingent Order	160
Week 6 Readings	161
Week 6 Application: Geohistory	162
Week 6: Love and the Cosmos	164
Week 6: Conversation Assignment	164
Week 6: Last Words	164
<b>Week 7: Imagining God and Nature</b>	<b>165</b>
Week 7 Perspective: Imagining God and Nature	166
Week 7 Readings	168
Week 7 Application: Out of the Silent Planet	170
Week 7: Love and the Cosmos	171
Week 7: Conversation Assignment	171
Week 7: Last Words	171
<b>Week 8: Stratified Reality</b>	<b>172</b>
Week 8 Perspective: Stratified Reality	173
Week 8 Readings	175
Week 8 Application: Reality in Many Dimensions	176
Week 8: Love and the Cosmos	178
Week 8: Conversation Assignment	178
Week 8: Last Words	178
<b>Week 9: Dualism</b>	<b>179</b>
Week 9 Perspective: Dualism	180

Week 9 Readings	181
Week 9 Application: Dilemmas of Design	183
Week 9: Love and the Cosmos	184
Week 9: Conversation Assignment	184
Week 9: Last Words	184
<b>Week 10: Natural Theology</b>	<b>185</b>
Week 10 Perspective: Natural Theology	186
Week 10 Readings	188
Week 10 Application: Evolution	190
Week 10: Love and the Cosmos	191
Week 10: Website Task #3	191
Week 10: Last Words	191
<b>Week 11: The Priest of Creation</b>	<b>192</b>
Week 11 Perspective: The Priest of Creation	193
Week 11 Readings	195
Week 11 Application: The New Creation	196
Week 11: Love and the Cosmos	198
Week 11: Website Task #4	198
Week 11: Last Words	198
<b>Epilogue</b>	<b>199</b>





## TH504 • Trinitarian Perspectives on Faith and Science

### Syllabus

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Instructor: Kerry V. Magruder

Contact me through the GCS course website: log into the course, and in the right-hand column go to the block labeled “message my professor.”

Weekly online office hours will be posted for individual or group conversation via Zoom or FaceTime videochat. See information posted in the News forum. *Note:* office hours are “drop in,” not an extra class period. They are like office hours for a residential course. More than one person can drop by my “office” at the same time.

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### GCS Mission Statement

*“Equipping the Saints for Pastoral Ministry.”* We are committed to equip the saints for pastoral ministry through quality graduate-level distance education programs in biblical, theological, ministerial and pastoral studies informed by Incarnational Trinitarian faith.

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### Course description

The early church developed the doctrine of creation through sustained theological reflection on the Incarnation. This course explores what it might mean today to ground our thinking about science, nature, and creation in the foundational theological perspectives of the Incarnation, Resurrection, and Trinity. This course surveys some of the conflict points for science and religion frequently encountered in modern culture, reassessing them in light of the theological perspectives of the Trinitarian theology of Thomas F. Torrance and C. S. Lewis.

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*How TH504 relates to other GCS courses:*

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This course anticipates select themes from the GCS courses on the Doctrine of the Trinity (TH505), Christology of T. F. Torrance (TH508), and Theology of C. S. Lewis (TH507). TH504 is not a prerequisite for those courses, but they complement one another in several ways because the perspectives on science introduced here flow naturally from the theology of the Incarnation and Trinity. Therefore this course may be taken before, alongside, or subsequent to those courses, although for greatest benefit I recommend taking courses in the order suggested by the course number sequence as listed in the academic catalog. In addition, if you have already taken BI501 Hermeneutics, CM501 Church History 1, CM502 Church History 2, and/or TH501 Nature of God and Jesus Christ, you may find that the material covered in those courses will give you a head start for this course.

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*Why T. F. Torrance? Why C. S. Lewis?*

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Examining the views of Torrance and Lewis are helpful because:

- They are two of the most highly regarded 20th-century Christian writers.
- Each wrote in the Nicene theological tradition of Athanasius.
- The theology of each is encountered in-depth in other GCS courses.
- Each also wrote *prolifically* on Christianity and science!
- Their books are not textbooks, but classics, for life-long learning.
- Many report that reading their books is an intellectually exhilarating, life-changing experience.
- Each spoke anchored in the Church, for the sake of the world.

Rather than an issues-based course, the course is designed to help one develop a Trinitarian theological instinct for science. That is the chief aim of the course. It is also a seminar to prepare you for lifelong reading of T. F. Torrance and C. S. Lewis with greater ease and understanding. (Think of the lectures as experiences in seminar-style reading of their works.)

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## Required Readings

Bibliographic information indicated below, for works by Torrance, is for the first edition, yet for this course any edition is fine. The approximate price indicated is based on a recent print edition at Amazon; the other booksellers may offer copies at lower prices. Please obtain these books before class begins.

1. Torrance, Thomas F. *Space, Time and Resurrection (STR)*. Edinburgh: Handsel Press, 1976; #1976-331. ISBN: 9780905312002. 209 pp. We will read excerpts. About \$30 at online booksellers. Available in many editions, including Apple Books and Kindle.

2. Torrance, Thomas F. *The Trinitarian Faith: The Evangelical Theology of the Ancient Catholic Church*. Edinburgh: T&T Clark, 1988; #1988-489. About \$27 online for ISBN 0567665585 edition. Available in many editions, including audio lectures, Apple Books and Kindle. 345 pp. We will read excerpts. *The Trinitarian Faith* is also recommended reading for TH505 Doctrine of the Trinity.
  - For works by Torrance, click on any “McGrath number” (e.g., #1976-331) to go to the first edition record at [tftorrance.org](http://tftorrance.org). Look in the right margin of that record to find links to all known later editions, translations, digital editions, and original audio lectures, as well as to booksellers via LibraryThing, Amazon, Bookfinder and AbeBooks.
3. Lewis, C. S. *Out of the Silent Planet*. New York: Macmillan Publishing Co., 1965. Originally published in 1938. 160 pp. About \$10 at online booksellers for ISBN 0743234901 edition. Available in many editions, including Apple Books, Kindle and in audiobook format. The audiobook is 5 hours and 31 minutes long.
4. Max McLean, “C.S. Lewis On Stage – The Most Reluctant Convert.” Vision Video, 2019. NTSC, all regions. ASIN#: B0788WSV81. 77 minutes. [Amazon US](#). The DVD is about \$14 at online vendors. Also available on many streaming services; e.g., available free in the US with Amazon Prime.

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*“How many a man has dated a new era in his life from the reading of a book!” Henry David Thoreau*

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## Recommended Reading

1. Lewis, C. S. *The Abolition of Man*. New York: Macmillan Publishing, 1947. [LibraryThing](#). About \$10 at online booksellers for ISBN: 9780060652944. 128 pp. We will read excerpts. In ch. 3, itself titled “The Abolition of Man,” Lewis set out what he believed to be the major theme of the Ransom Trilogy.
2. Lewis, C. S. *The Problem of Pain*. HarperOne, 2001. [LibraryThing](#). About \$11 at online booksellers for ISBN: 0060652969. 176 pp. We will read excerpts. Required in TH507 Theology of C. S. Lewis.
3. Lewis, C. S. *Miracles: A Preliminary Study*. New York, MacMillan Publishing, 1947. [LibraryThing](#). About \$10 at online booksellers for ISBN: 0060653019. 294 pp. We will read excerpts.



4. Lewis, C. S. *Mere Christianity*; [LibraryThing](#). About \$10 at online booksellers. We will not read the majority of this book; only excerpts will be assigned.
5. Torrance, Thomas F. *Incarnation: The Person and Life of Christ*. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2008; [#2008-TFT-1](#). 371 pp. About \$34 at online booksellers for ISBN 0830824596. Required for TH508 Christology of T. F. Torrance. In this course readings will be cross-referenced to chapters 2, 3 and 9.
6. Torrance, Thomas F. *Atonement: The Person and Work of Christ*. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2009; [#2009-TFT-1](#). 489 pp. About \$35 at online booksellers for ISBN 0830824588. Required for TH508 Christology of T. F. Torrance. In this course, we will read on reserve (no purchase necessary) the Epilogue, "Reconciliation of the Mind," pp. 437-447.

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*"I have sought after rest in everything;  
and found it nowhere except in a corner with a book."  
– Thomas à Kempis, The Imitation of Christ*

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## Student Learning Outcomes

This course will contribute primarily to GCS Student Learning Outcome #2:

*Reason from a sound theological basis as new covenant Christians centered in Incarnational Trinitarian faith.*

This course will contribute to Program Objective #2 for the Master of Pastoral Studies (MPS) and Master of Theological Studies (MTS):

*Challenge the student to think theologically, to analyze differences between various Christian traditions, and to synthesize central themes of the nature of God and Christian proclamation of the word of God.*

### **TH504 Course Objectives**

This course will equip participants to...

1. Converse with two scientists or creation workers about their vocational callings, in order to gain experience that will help make our churches safe and welcoming places for those who practice, or wish to pursue, any of the fields of the natural sciences, including biology, astronomy, physics, chemistry, geology, healthcare,

technology and engineering, agriculture, and conservation.

2. Critically analyze misconceptions that underlie the most common caricatures which assume an alleged inevitable conflict between Christian faith and modern science such as the flat Earth myth, the trial of Galileo, the immensity of the universe, the plurality of worlds, the age of the Earth, Darwin and evolution, and the Church and ecology, in order to be able to respond to persons who are working through such issues.
3. Develop and demonstrate a practice of thinking theologically about God and nature, or faith and reason, according to a “Christian theological instinct” that reasons from a Trinitarian basis and goes beyond responding *ad hoc* to select misconceptions about Christianity and science.
4. Develop and articulate a “relational natural theology” which arises naturally and organically from the nature of the gospel and the doctrines of the Incarnation and the Trinity. That is, to practice drawing out the implications of the Incarnation and the Trinity for a Christian perspective on creation and the natural sciences.
5. Describe and explain select perspectives of T. F. Torrance and C. S. Lewis on faith and science.
6. Enter into regular weekly discussions with other students in the course to share ideas, concepts and reflections on how the course materials apply to ministry.
7. Practice reading well by adopting strategies appropriate to the nature of the text, such as close reading for the dense prose of T. F. Torrance and literary reading for the Ransom Trilogy of C. S. Lewis.

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*What they undertook to do  
They brought to pass;  
All things hang like a drop of dew  
Upon a blade of grass.  
— William Butler Yeats*

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## Tentative Course Schedule

As with most GCS courses, this class is 13 weeks long.

Week 1 is an Orientation, which features two external presentations to introduce you to T. F. Torrance and C. S. Lewis. If you wish, the Orientation assignments (including reading the long course packet) may be started a week before the semester officially begins. And during Week 1 you may get an early start on the assignments for Week 2.

Weeks 2-11 have a regular weekly rhythm including two lectures, a “Perspective” presentation and an “Application” presentation, as shown in the table below.

Weeks 12-13 are for finishing assignments – including the final paper, which is an ongoing essay revised in draft form throughout the semester. And in Week 13 you will receive final feedback from the instructor.

The schedule is subject to change at the discretion of the instructor.

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*“Education is not the filling of a pail, but the lighting of a fire.”*  
– William Butler Yeats (attributed)

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At a glance			
WEEK	Spring 2021		
ORIENTATION			
0	Jan 2	Registration begins. Orientation assignments open. Orientation assignments include reading the long course packet, and may be started before the semester officially begins.	
1	Jan 14	Orientation #1: <u>Thomas A. Noble</u> , “T. F. Torrance on the Centenary of His Birth” (audio or video)	Orientation #2: <u>Max McLean</u> , “C. S. Lewis on Stage: The Most Reluctant Convert” (DVD or streaming from Amazon Prime)
REGULAR WEEKLY SEMINARS			
WEEK		PERSPECTIVE	APPLICATION
2	Jan 20	Thinking Theologically	Flat Earth Myth
3	Jan 27	Language and Reality	The Galileo Affair
4	Feb 3	Knowing Kata-physin	Interdisciplinary Relations
5	Feb 10	Being and Relation	Relational Physics (& Gen 1)
6	Feb 17	Contingent Order	Geohistory
7	Feb 24	Imagining God and Nature	<i>Out of the Silent Planet</i>
8	March 2	Stratified Reality	Reality in Many Dimensions
9	March 9	Dualism	Dilemmas of Design
10	March 16	Natural Theology	Evolution
11	March 23	The Priest of Creation	The New Creation
COURSE COMPLETION			
12	March 30	All regular assignments for weeks 1-10 and extra-credit book essays are due by Monday, April 7, 2020, 11 pm.	
13	Apr 7	Week 12 is devoted to final revisions of your semester-ongoing paper on “Love and the Cosmos.” Due 11 pm Wednesday, April 9, 2020.	

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## Course Requirements and Assignments

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### SEMESTER TOTAL POINTS

	Description	Points
<b>Orientation</b> Weeks 0-1	Orientation tasks involve reading the Course Packet, writing an autobiographical sketch, and posting initial reflections on “Love and the Cosmos.” Follow the instructions in the Week 1 detailed schedule. The Course Packet and Week 1 Orientation Assignments will be available after Registration opens on Jan 2, 2020, so you may complete it before the semester begins!	25
<b>Weekly assignments</b> Weeks 2-11	25 points/week * 10 weeks. See below.	250
<b>Final paper</b> Weeks 12-13	Due Week 13, April 9, 2020. 4-page paper on “Love and the Cosmos.”	25
<b>Optional Extra Credit</b>	Book Essay (up to 4 essays, at up to 8 points each)	
		300

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### WEEKLY ASSIGNMENTS

Each of the 10 regular weeks of the semester (weeks 2-11) has a rhythm of 5 regularly recurring assignments, worth a total of 25 points per week.

- **Two Seminar assignments per week:**

The Perspective Seminar and the Application Seminar. 10 points total each. 10 hrs and 20 points total. The seminar assignments are the heart of the course. The first seminar each week introduces a general “perspective”; the second explores “applications” of that week’s perspective. Each seminar includes three components:

1. A **video** with a script that simulates seminar-style close reading (2 hrs; 4 hrs/wk).
  2. **Additional reading** related to video (90 mins; 3 hrs/wk). The additional readings consist of close reading of select passages from T. F. Torrance (30 pp./wk) or literary reading of C. S. Lewis (80 pp./wk). Readings extend the seminar videos.
  3. **Forum interaction** (90 mins).
- In the videos it is as if we were in a seminar class, conducting close readings together of select paragraphs from the assigned texts. The additional readings are

keyed to the videos. In the forum we discuss the video and the related readings.

- 1 post in the weekly “Love and the Cosmos” forum, where you update an essay throughout the semester that will become the basis for the final paper (1 hr, 1 pt).
- 1 “Last Words” assignment, which include a final replies to responses on the week’s forums (1 hr, 2 pts).
- Either a weekly Website Task (4 weeks), OR a Conversation with a scientist or creation worker (6 weeks). 1 hr and 2 points each.

Weekly Assignments Table				
Weekly Assignments	Hrs/wk	Schedule A*	Schedule B*	Pts/wk
<b>1. Perspective Seminar</b> 5 hrs		Mondays 11 pm	Mondays 11 pm	10 pts
Presentation	2 hrs			
Reading	1.5 hrs			
Forum	1.5 hrs			
<b>2. Application Seminar</b> 5 hrs		Thursdays 11 pm	Thursdays 11 pm	10 pts
Presentation	2 hrs			
Reading	1.5 hrs			
Forum	1.5 hrs			
<b>3. Love in the Cosmos</b>	1 hrs	Fridays 11 pm	Thursdays 11 pm	1 pts
<b>4. Conversation OR Website Task</b> (1 hr)	1 hrs	Fridays 11 pm	Fridays 11 pm	2 pts
<b>5. Last Words</b> 1 hr	1 hrs	Fridays 11 pm	Fridays 11 pm	2 pts
<b>Totals</b>	<b>13 hrs</b>	<i>*Sample schedules; yours may vary.</i>		<b>25 pts</b>

#### *Schedules A and B and C...*

The sample schedules shown in the table are suggestions; yours may vary.

Considering various schedule options and committing to one that both works for you and allows you to interact with other students is part of the Week 1 Orientation

assignments. Each week's assignments open the week before, and are officially due no later than the Saturday of the following week, so you actually have a 3-week window in which to complete a given week's work. This flexibility acknowledges that "life happens," particularly in ministry. Yet do not presume upon this flexibility; it is not a "letter of indulgence" to cover the sin of procrastination. Rather, set a schedule and keep to it, and even better, work ahead!

### *Weekly Forums*

Weekly forums are repeated each week; e.g., there is a "Week 1 Perspective Forum," and a separate "Week 2 Perspective Forum," and the same for each week's "Application Forum." These are the weekly forums:

- Week # Perspective Forum (10 posts, Weeks 2-11)
- Week # Application Forum (10 posts, Weeks 2-11)
- Week # Love and the Cosmos Forum; here you will post initial reflections on the course theme during the Orientation activities of Week 1, and then post weekly revisions until finally submitting a final version as your semester paper. (11 posts, Weeks 1-11)

### *Semester Forums*

In contrast, a semester forum is one in which posts are made in a single forum of the course, irrespective of the week. This course has the following semester forums:

- Orientation Forum, to post your autobiographical sketch and your weekly schedule (2 posts, Week 1).
- Conversation Forum, to post reflections on 2 conversations with scientists or creation workers you will conduct during the semester (2 posts, any time during the semester).
- Love and the Cosmos Final forum: here you will post the final version of your "Love and the Cosmos" essay. (1 post, Week 12-13).

Forum interaction is central to the design of this course and makes up over one third of the semester grade (see table, next page). All learning is personal, and personal activity is always relational. This course is designed to optimize interactions and the development of understanding in the context of personal relations. Your reflections will represent *thought-in-the-making*, not finished essays. Forum discussions are the primary place where you will make *connections between the class material and ministry*. Dare to make the best of this opportunity. Express how you understand the course material, and how it may apply to ministry, even before your views are fully formed. You don't have to fear being marked down, as grades for forum participation are based on effort. And you will benefit from the thoughtful responses of others as you go on to process your thoughts more deeply. Know that others are likely working through the material with similar trepidation.

Imagine that we are in a seminar class and exchanging ideas honestly and forthrightly in an atmosphere of mutual trust and sympathy as we together seek to understand the course material and relate it to our lives. A forum reflection is not fluff like a casual

conversation at a sports event, nor independent study, nor a fully-formed final paragraph of a peer-reviewed research paper. Rather, it's like going around the room in a seminar class where each person states in turn what they took from the common reading and why it matters to them; then discussion and further learning ensues. If your forum reflections prompt thoughtful replies, consider them a success.

Course Forums***						
Forum	Weeks	Number of posts	Pts	Pts due to Forum	Semester Points	% of Grade (300 pts total)
Orientation Forum	0-1	2	20	10/20	10 pts	3.33%
Perspective Forum	1-10	10	7	1/2	35 pts	11.67%
Application Forum	1-10	10	7	1/2	35 pts	11.67%
Conversation Forum	3, 5, 7, 9	4	5	1/2	10 pts	3.33%
<b>Total</b>		<b>26</b>	<b>45 pts</b>	<b>2 pts</b>	<b>90 pts</b>	<b>30%</b>

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*"It is a serious thing to live in a society of possible gods and goddesses, to remember that the dullest and most uninteresting person you talk to may one day be a creature which, if you saw it now, you would be strongly tempted to worship, or else a horror and a corruption such as you now meet, if at all, only in a nightmare. All day long we are, in some degree, helping each other to one or other of these destinations. There are no ordinary people. You have never talked to a mere mortal. Nations, cultures, arts, civilizations – these are mortal, and their life is to ours as the life of a gnat. But it is immortals whom we joke with, work with, marry, snub, and exploit – immortal horrors or everlasting splendors."*

— C. S. Lewis, *"The Weight of Glory"*

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### *Final Paper: Love and the Cosmos*

The final exam is a 4-page take-home paper that counts for 25 points or 10% of the final grade. It is due by 11 pm Wednesday, April 8, 2020, the 13th week of class. In this paper, you will deepen your reflections on "Love and the Cosmos" by drawing connections between the perspectives we have explored this semester and the Nicene doctrine of the Trinity as elucidated by Torrance in *Space, Time and Resurrection* and



*The Trinitarian Faith.* Although Week 12 is devoted to the paper, you will actually be getting a head start on it all semester!

*“Reading maketh a full man,  
conference a ready man,  
writing an exact man.”  
– Francis Bacon*

(readings and lectures)  
(forums)  
(final paper)

## COURSE ASSIGNMENTS - COMPREHENSIVE SUMMARY

Hours per Assignment and Total semester hours					
Assignment	Hours each	#/week	Hrs/wk	#wks	Total hrs
Orientation assignments	15 hrs	1/wk	15 hrs/wk	1 wks	15 hrs
Reading/watching the weekly Perspective and Application presentations	2 hrs	2/wk	4 hrs/wk	10 wks	40 hrs
Posting a thoughtful reflection on the Perspective and Application forums	1.5 hrs	2/wk	3 hrs/wk	10 wks	30 hrs
Reading assignments	3 hrs	1/wk	3 hrs/wk	10 wks	30 hrs
Reading Notebook Entries (forum)	1 hrs	1/wk	1 hrs/wk	10 wks	10 hrs
Last Words	1 hrs	1/wk	1 hrs/wk	10 wks	10 hrs
Conversations	1 hrs	1/wk	1 hrs/wk	6 wks	6 hrs
Website tasks	1 hrs	1/wk	1 hrs/wk	4 wks	4 hrs
Final paper	5 hrs	1/wk	5 hrs/wk	1 wks	5 hrs
<b>Total hours semester</b>					<b>150 hrs</b>
<b>Total hours weekly</b>		<b>13 hrs/wk</b>	<b>130 hrs</b>		

*“Teach us to number our days,  
that we may gain a heart of wisdom.”  
– Psalm 90:12*

Points/Assignment and Total Points/Percentages						
Assignment	Points each	#/week	Points/wk	#wks	Points total	%
Orientation assignments	25 pts	1/wk	25 pts/wk	1 wks	25 pts	8.33%
Weekly Perspective and Application Seminar Assignments	10 pts	2/wk	20 pts/wk	10 wks	200 pts	66.67%
Love in the Cosmos, Last Words, Website Tasks, and Conversations	5 pts	1/wk	5 pts/wk	10 wks	50 pts	16.67%
Final paper	25 pts	1/wk	25 pts/wk	1 wks	25 pts	8.33%
<b>Total Points</b>					<b>300 pts</b>	<b>100%</b>

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*"I seek not a long life, but a full one, like You, Lord Jesus." Jim Eliot*

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**GRACE COMMUNION  
SEMINARY**

## **TH504 • Trinitarian Perspectives on Faith and Science**

### **Appendices**

These Appendices contain general information about the course, detailed explanations of assignments and step-by-step instructions for completing them, and various supplemental materials.<sup>1</sup>

Read the Syllabus and the Appendices in their entirety before the end of the first week of class.

See the Weekly Schedules section for the Week 1 assignments. Complete the Orientation Assignments for Week 1 as soon as possible.

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<sup>1</sup> The structure and pedagogy of this course draw significantly upon the course design of my online “History of Science to Newton” course at the University of Oklahoma ([kerrymagruder.com/hsci/](http://kerrymagruder.com/hsci/)). Many thanks to my colleague Prof. Laura Gibbs, who has been an inspiration for the online pedagogical model of all of my online courses.

## Appendix A: Grading Standards

Grades are assigned according to the criteria indicated in the following table. The final grade will be calculated based on a 100-point %-age scale. Letter grades are assigned as indicated.

Total points	Letter grade	Description
<b>285-300</b>	95 - 100% = A	Outstanding work: Above and beyond the requirements; outstanding effort and significant achievement are evident. Some measure of remarkable skill, creativity, or energy is also evident. Although most students in this class do great work, we cannot give an A to every student who does well.
<b>270-284</b>	90 - 94% = A-	
<b>261-269</b>	87 - 89% = B+	Above average work: Fulfills all aspects of the assignment and goes a bit beyond minimum competence to demonstrate reflection, research, and integration of the texts that show extra effort, achievement or improvement. This is a very honorable grade.
<b>252-260</b>	84 - 86% = B	
<b>240-251</b>	80 - 83% = B-	Average work: Fulfills all aspects of the assignment with competence. Assignments are completed as assigned. This is also an honorable grade.
<b>231-239</b>	77 - 79% = C+	
<b>222-230</b>	74 - 76% = C	
<b>210-221</b>	70 - 73% = C-	Below average work: Below average either because some aspect of the assignment has not been fulfilled or because the number of errors interferes with clear communication. A grade of C- may also indicate failure to follow directions, failure to follow specific recommendations, or failure to demonstrate effort and improvement.
<b>180-209</b>	60 - 69% = D	Not acceptable.
<b>0-179</b>	00 - 59% = F	Not acceptable, either because the student did not complete the assignment as directed, or because the level of performance is below an acceptable level for graduate level work.

With each “Gradebook Declaration” ([Appendix I](#)), watch your points accumulate in real time throughout the semester!

Description		For details see...	Points
<b>Orientation</b>	Weeks 0-1	Weekly Schedules, Week 1	25
<b>Weekly assignments</b>	Weeks 2-11 25 points/week * 10 weeks	Appendices N-T	250
<b>Final paper</b>	Weeks 12-13. Due Week 13, April 9. Essay on the Trinity, Love and the Cosmos.	Appendix U	25
<b>Book Essay</b>	Optional Extra Credit (up to 3 essays, at 8 points each)	Appendix V	
			300

Use the chart below to track your weekly progress. For example, if you have 116 points at the end of Week 5 (when all Week 5 assignments have been completed), then you are headed toward a B- in the course. Or, 135 points at the same time would mean you are headed toward an A.

Week	Total Points Possible	A	B	C	D
1	45 pts	40-45	36-39	31-35	27-30
2	70 pts	63-70	56-62	49-55	42-48
3	95 pts	85-95	76-84	66-75	57-65
4	120 pts	108-120	96-107	84-95	72-83
5	145 pts	130-145	116-129	101-115	87-100
6	170 pts	153-170	136-152	119-135	102-118
7	195 pts	175-195	156-174	136-155	117-135
8	220 pts	198-220	176-197	154-175	132-153
9	245 pts	220-245	196-219	171-195	147-170
10	270 pts	243-270	216-242	189-215	162-188
Final	300 pts	270+	240-269	210-239	180-209

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## Appendix B: Course Policies

### **GCS website:**

Using the GCS website for the course, students access all materials, post all assignments (quizzes, papers, forum posts, etc.), and send private messages to the instructor and one another.

### **To contact the instructor:**

Log in to our website, go to the main page for this course, and in the right column you will see a section named “Message My Professor.” Click on my name there to send a message to me (your message will not be visible to any other students). We want all class-related communications to be sent through the website, rather than email.

After the course is over, in the future, please keep in touch using my personal email address, [kvmagruder@mac.com](mailto:kvmagruder@mac.com).

### **Nondiscrimination policy:**

Grace Communion Seminary admits students of any race, sex, color, creed, age, or national origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school. It does not discriminate on the basis of race, sex, color, creed, age, or national origin in administration of its educational policies, admissions policies, scholarship and loan programs, and other school-administered programs.

### **Class confidentiality:**

Grades are confidential; we do not report your grades to your employer or to anyone else outside of GCS administration. Materials posted in the class, including lectures and discussion forums, are for class use only. Students are to protect the confidentiality of all classroom materials and should not share any classroom materials without written permission of the person quoted and the instructor.

### **Library resources:**

Some students already have access to appropriate books; others will need to plan ahead, to obtain these books at a local seminary library, through interlibrary loan at a public library, or by mail from the GCS library.

Consult the document “Research Resources Available off Campus” on the GCS website. Go to the “Public Information” page: <http://gcs.edu/course/view.php?id=23>. Look for “Research Resources.”

While you’re there, look at the [GCS library catalog](#), too. GCS will be happy to share resources with you! For US delivery, expect books to arrive in 7-10 days. The loan period is 4 weeks. For details, see the “[Academic Catalog and Student Handbook](#),” section VI.H.



### **American With Disabilities Act (ADA) of 1990**

We will provide reasonable accommodations for students with documented disabilities on a case-by-case basis. Contact the Dean of Faculty to discuss needs and possible accommodations.

### **Adjustments for Pregnancy/Childbirth Related Issues**

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to accommodations based on temporary disability.

See also:

- [Appendix J](#), “Honor Code”;
- [Appendix L](#), “Course Etiquette”; and
- [Appendix M](#), “Academic Freedom.”

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## Appendix C: Goals, Objectives, and Outcomes

The outcomes below are repeated from the main section of the syllabus with annotations added to indicate how they are implemented in the course design. See: [GCS Goals and Objectives](#).

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### GCS MISSION STATEMENT

“Equipping the Saints for Pastoral Ministry. We are committed to equip the saints for pastoral ministry through quality graduate-level distance education programs in biblical, theological, ministerial and pastoral studies informed by Incarnational Trinitarian faith.”

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### GCS STUDENT LEARNING OUTCOMES (SLO)

This course will contribute primarily to GCS Student Learning Outcome #2:

- *Reason from a sound theological basis as new covenant Christians centered in Incarnational Trinitarian faith.*

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### PROGRAM OBJECTIVES

This course will contribute to Program Objective #2 for the Master of Pastoral Studies (MPS) and Master of Theological Studies (MTS) programs:

- *Challenge the student to think theologically, to analyze differences between various Christian traditions, and to synthesize central themes of the nature of God and Christian proclamation of the word of God.*

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### TH504 COURSE OBJECTIVES

This course will equip participants to...

1. Converse with four scientists and creation workers about their vocational callings, in order to gain experience that will help make our churches safe and welcoming places for those who are involved in any of the fields of the natural sciences, including healthcare, technology and engineering, agriculture, and conservation.

*Implementation: Conversation assignments.*

2. Critically analyze misconceptions that underlie the most common caricatures of conflict between Christian faith and modern science such as the flat Earth myth, the trial of Galileo, the immensity of the universe, the plurality of worlds, the age of the Earth, Darwin and evolution, and the Church and ecology, in order to be able to

respond to persons, unbelievers and believers alike, who are troubled about such issues.

*Implementation: Perspective and Application assignments.*

3. Develop and demonstrate a practice of thinking theologically about God and nature, or faith and reason, according to a “Christian theological instinct” that reasons from a Trinitarian basis and goes beyond responding *ad hoc* to select misconceptions about Christianity and science.

*Implementation: Perspective and Application assignments, and forum reflections.*

4. Develop and articulate a creational theology which arises naturally and organically from the nature of the gospel and the doctrines of the Incarnation and the Trinity. That is, to practice drawing out the implications of the Incarnation and the Trinity for a Christian perspective on creation and the natural sciences.

*Implementation: Perspective Assignments, and Final Paper.*

5. Describe and explain select perspectives of T. F. Torrance and C. S. Lewis on faith and science.

*Implementation: Perspective and Application Assignments, and Final Paper.*

6. Enter into weekly discussion with other students in the course to share ideas, concepts and reflections on how the course materials apply to ministry.

*Implementation: The Forum components of the weekly Perspective and Application Assignments; secondarily, in the Conversations.*

7. Practice reading well by adopting strategies appropriate to the nature of the text, such as close reading for the dense prose of T. F. Torrance and literary reading for the Ransom Trilogy of C. S. Lewis.

*Implementation: Reading components of the Perspective and Application assignments.*

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*“Learn everything. Afterward you will discover that nothing has been superfluous.” Hugh of St. Victor, 12th century*

*“Learn everything. Afterward you will discover that nothing has been superfluous.” Kerry Magruder, 21st century*

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## Appendix D: Top 10 Lists for Further Reading

What will you put next on your reading list, after this course is over?

This section offers four “Top 10” lists of sources on faith and science for Torrance and Lewis:

- Torrance Top 10 “Primary sources”
- Lewis Top 10 “Primary sources”
- Torrance Top 10 “Secondary sources”
- Lewis Top 10 “Secondary sources”

“Primary” sources are those written *by* a particular person or *in* a particular period; “secondary” sources are written *about* that person or period.

The first two Top 10 lists recommend additional primary sources by Torrance and Lewis...

- *for faith and science,*
- *beyond the assigned texts for this course.*

They are followed by two Top 10 lists of secondary sources, first for Torrance and then for Lewis.

These lists would be different if they were for the *theology* of Torrance and Lewis; rather, each list includes a selection from only those books which address perspectives on *faith and science* or which are of such general significance that no advanced student should be unfamiliar with them.

The required readings provide an accessible basis for an initial survey, as if from an aerial view, of Torrance’s and Lewis’ thinking on theology and the natural sciences.



This is us! – now  
Credit: Bob Lock's 1929 Command-Aire.

For those areas in which one wishes to move beyond a high-altitude introduction and go on a cross-country walk, one must turn to other writings where Torrance and Lewis amplified their thought.



This is us! – future  
Credit: Candace and I walking the Glen Tilt trail.

*Top 10 Primary Lists:* On that future walking tour, you'll want to become familiar with an additional 10 titles by Torrance and 10 titles by Lewis. They are next steps in the life-long process of growing in appreciation of their understanding of faith and science. These works indicate something of what was for both of them a sustained and substantive engagement.

*Top 10 Secondary Lists:* These titles are the most valuable books to which I would guide you for general help once you are ready to pursue further study of Torrance and Lewis on faith and science. Shorter essays published as articles and chapters are not listed individually; they will be discovered easily enough by consulting the bibliographies of these titles.

These are by no means all the sources used to create the lectures; each lecture includes citations to indicate the primary and secondary texts relied upon in preparing that specific presentation.

Any such lists, of course, reflect the idiosyncrasy of the scholar; I have compounded this bias by listing the secondary sources in a roughly-ranked order of importance *for faith and science*. Of course, it all depends on what you're interested in. If you find the material of this course helpful or interesting, I believe these books will not let you down, but take you "further up and further in." Feel free to correspond with me in the future, after this course is over ([kvmagruder@mac.com](mailto:kvmagruder@mac.com)), if you "take up and read" any of these primary or secondary books. The goal of education, after all, is to establish a habit of lifelong learning!

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Around 2000 B.C. an Egyptian priest counseled his son:

*"Behold, nothing surpasses books.*

*Would that I might make you love books more than your mother.*

*Would that I might make their beauty enter before your face,*

*for it is greater than any office.*

*You are to set your heart on books."*

(translation of a hieroglyphic papyrus in the British Museum)

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### TORRANCE TOP 10 "PRIMARY"\*

1. Torrance, Thomas F. *Preaching Christ Today: The Gospel and Scientific Thinking*. Grand Rapids, Michigan: Wm. B. Eerdmans, 1994; #1994-571. Two lectures that provide an ideal entry into Torrance's coordination of theology and science.
2. Torrance, Thomas F. *The Ground and Grammar of Theology* (GGT). Charlottesville, Virginia: The University of Virginia Press, 1980; #1980-369. 192 pp. Also available in Logos Bible Software (\$25). GGT originated as popular lectures, and so may be read as a relatively accessible general overview of Torrance's creational theology. Original audio lectures are also available.
3. Torrance, Thomas F. *Divine and Contingent Order*. Oxford: Oxford University Press, 1981; #1981-385. Available in many editions, including Logos Bible Software (\$18.99). Torrance's magisterial work on contingent order.
4. Torrance, Thomas F. *Theological Science*. London: Oxford University Press, 1969; #1969-263; #1969-263. Another magisterial work, on the nature of science.
5. Torrance, Thomas F. *The Christian Frame of Mind: Reason, Order, and Openness in Theology and Natural Science*. 2d ed. Colorado Springs, 1989; #1989-505.
6. Torrance, Thomas F. *Space, Time and Incarnation*. Oxford, London, New York: Oxford University Press, 1969; #1969-262. For similar themes, presented in more detail, see also: T. F. Torrance, *Divine Meaning: Studies in Patristic Hermeneutics*.\*\*\*
7. Torrance, Thomas F. *Transformation and Convergence in the Frame of Knowledge: Explorations in the Interrelations of Scientific and Theological Enterprise*. Belfast: Christian Journals, 1984; #1984-433.
8. Torrance, Thomas F. *Reality and Scientific Theology*. Theology and Science at the Frontiers of Knowledge, no. 1, edited by Thomas F. Torrance. Edinburgh: Scottish Academic Press, 1985; #1985-450.



9. Torrance, Thomas F. *Theological and Natural Science*. The Torrance Collection. Eugene, Oregon: Wipf and Stock, 2002; [#2002-TFT-3](#).
10. Torrance, Thomas F. *God and Rationality*. London, New York: Oxford University Press, 1971; [#1971-290](#).
11. Torrance, Thomas F. *Christian Theology and Scientific Culture*. Theology and Scientific Culture, no. 1, edited by Thomas F. Torrance. Belfast, Dublin, Ottawa: Christian Journals, 1980; [#1980-368](#). OK, so I can't count; this is a "top 11."

\* *for faith and science, beyond the assigned texts for this course.*

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### LEWIS TOP 10 "PRIMARY"\*

1. Lewis, C. S. *Perelandra*. New York: Macmillan Publishing Co., 1965. Originally published 1943. 222 pp. Vol. 2 of the Ransom Trilogy.
2. Lewis, C. S. *That Hideous Strength*. New York: Macmillan Publishing Co., 1965. 382 pages. Originally published 1945. Vol. 3 of the Ransom Trilogy.
3. Lewis, C. S. *The Abolition of Man*. New York: Macmillan Publishing, 1947. [LibraryThing](#). About \$10 at online booksellers for ISBN: 9780060652944. 128 pp. We will read excerpts. In ch. 3, itself titled "The Abolition of Man," Lewis set out what he believed to be the major theme of the Ransom Trilogy.
4. Lewis, C. S. *The Problem of Pain*. HarperOne, 2001. [LibraryThing](#). About \$11 at online booksellers for ISBN: 0060652969. 176 pp. We will read excerpts. Required in TH507 Theology of C. S. Lewis.
5. Lewis, C. S. *Miracles: A Preliminary Study*. New York, MacMillan Publishing, 1947. [LibraryThing](#). About \$10 at online booksellers for ISBN: 0060653019. 294 pp. We will read excerpts.
6. Lewis, C. S. *Mere Christianity*; [LibraryThing](#). About \$10 at online booksellers. We will read excerpts.
7. Lewis, C. S. *God in the Dock*, edited Walter Hooper. Eerdmans, 1994. ISBN: 978-0802808684. \$12.02. Required in TH507 Theology of C. S. Lewis. In this course we may quote very short excerpts from the following chapters, which are among those relevant to this course (asterisked items are read in TH507):
  - "Dogma and the Universe," pp. 38-47.
  - **"Religion and Science," pp. 72-75.**
  - "The Laws of Nature," pp. 76-79.



- “The Grand Miracle,” pp. 80-88.\*
  - “Religion without Dogma,” pp. 129-146.\*
  - “The Pains of Animals,” pp. 161-171.
  - “On the Reading of Old Books,” pp. 200-207.
  - “Vivisection,” pp. 224-228.
  - “Bulverism,” pp. 271-277.\*
8. Lewis, C. S. *Christian Reflections*, Eerdmans, 1994. ISBN: 978-0802808691. \$10.44. Required in TH507 Theology of C. S. Lewis. In this course we may quote very short excerpts from the following chapters, which are relevant to this course (asterisked items are read in TH507):
- **“Funeral of a Great Myth,” pp. 82-83, on “Wellsianity.”**
  - “Historicism,” pp. 100-113.
  - **“The Language of Religion,” pp. 129-141.\***
  - **“The Seeing Eye,” pp. 167-176.\* Reply to Yuri Gagarin.**
9. Lewis, C. S. *The Discarded Image*. Cambridge University Press, 1964. \$10.44. A classic source for intellectual historians seeking to better understand the medieval and Renaissance cosmos.
10. Lewis, C. S. *The World’s Last Night and Other Essays*. San Diego: Harvest/Harcourt Brace Jovanovich, 1960. Includes **“Religion and Rocketry,”** and **“The World’s Last Night.”**
11. Lewis, C. S. *On Stories and Other Essays on Literature*. San Diego: Harvest/Harcourt Brace Jovanovich, 1982. Includes **“On Science Fiction,”** and **“A Reply to Professor Haldane.”**
12. C. S. Lewis. *An Experiment in Criticism*. Cambridge University Press, 1961. Discussed in the lecture on *kata physin* knowing.
13. C. S. Lewis. *Till We Have Faces*. Boston: Houghton Mifflin, 1956. Relevant to knowing as turning outward, reversing *incurvatus in se*, as discussed in the lecture on *kata physin* knowing.
14. C. S. Lewis. *The Weight of Glory*. New York: HarperOne, 1949. Essays include **“Learning in War-Time,” “Transposition,” “The Inner Ring,”** and **“Membership.”**
- \* *for faith and science, beyond the assigned texts for this course. OK, so “10” is not to be taken literally!*

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## TORRANCE TOP 10 “SECONDARY”

1. Colyer, Elmer M. *How to Read T. F. Torrance: Understanding His Trinitarian and Scientific Theology*. Downers Grove, Illinois: InterVarsity Press, 2001; #2001-EC-1. Recommended reading in TH508 Christology of T. F. Torrance. The closest thing to an extant systematic theology synthesizing Torrance’s thinking across the board. Of indispensable value for serious study of Torrance.
2. McGrath, Alister E. *T. F. Torrance: An Intellectual Biography*. Edinburgh: T & T Clark, 1999; #1999-AEM-1. Recommended reading in TH508, Christology of T. F. Torrance. The biographical account is found in Part One, along with the Epilogue, pp. 237-241. The chapters of Part Two explore select major themes of Torrance’s thought. The extensive bibliography with McGrath numbers appears at the end (now superseded by the [tftorrance.org](http://tftorrance.org) website). Along with Colyer, of indispensable value for serious study of Torrance. See also many other works by McGrath, such as his trilogy, *Nature, Theory, and Reality*, and the précis volume, *The Science of God*.
3. Habets, Myk. *Theology in Transposition: A Constructive Appraisal of T. F. Torrance*. Minneapolis: Fortress Press, 2013. Contains an assessment, with essential citations, of recent debates on Torrance’s “reconstructed natural theology.”
4. Stevick, Travis M. *Encountering Reality: T. F. Torrance on Truth and Human Understanding*. Emerging Scholars. Minneapolis: Fortress Press, 2016.
5. Molnar, Paul D. *Thomas F. Torrance: Theologian of the Trinity*. Great Theologians. Burlington, Vermont: Ashgate, 2009.
6. Paul D. Molnar and Myk Habets, eds., *T&T Clark Handbook of Thomas F. Torrance* (London, New York: T&T Clark, 2020); #2020-PDM-MH-1.
7. Colyer, Elmer M. *The Nature of Doctrine in T. F. Torrance’s Theology*. Eugene, Oregon: Wipf and Stock, 2001. Extended examination of what Torrance means by “integration of form.”
8. Colyer, Elmer M., editor. *The Promise of Trinitarian Theology: Theologians in Dialogue with T. F. Torrance*. Lanham, Maryland: Rowan & Littlefield Publishers, 2001. Includes responses by Torrance to contributors.
9. Dawson, Gerrit Scott, editor. *An Introduction to Torrance Theology: Discovering the Incarnate Saviour*. T&T Clark Theology. London: T&T Clark, 2007.
10. *Participatio* 7 (2017); #2017-P-1. Special issue devoted to “Science, Epistemology, and Natural Theology.”

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## LEWIS TOP 10 “SECONDARY”

1. Downing, David C. *The Most Reluctant Convert: C. S. Lewis' Journey to Faith*. InterVarsity Press, 2002.
2. Jacobs, Alan. *The Narnian: The Life and Imagination of C. S. Lewis*. HarperOne, 2005.
3. Ward, Michael. *Planet Narnia: The Seven Heavens in the Imagination of C. S. Lewis*. Oxford University Press, 2010.
4. Dickerson, Matthew, and David O'Hara. *Narnia and the Fields of Arbol: The Environmental Vision of C. S. Lewis*. Lexington, Kentucky: The University Press of Kentucky, 2009.
5. Schwartz, Sanford. *C. S. Lewis on the Final Frontier: Science and the Supernatural in the Space Trilogy*. Oxford University Press, 2009.
6. Downing, David C. *Planets in Peril: A Critical Study of C. S. Lewis's Ransom Trilogy*. Amherst: University of Massachusetts Press, 1992.
7. Sammons, Martha C. *A Guide Through C. S. Lewis' Space Trilogy*. Westchester, Illinois: Cornerstone Books, 1980.
8. Howard, Thomas. *C. S. Lewis: Man of Letters – A Reading of His Fiction*. San Francisco: Ignatius Press, 1987. Chapters 3, 4 and 5 consider each volume of the Ransom trilogy.
9. Myers, Doris T. *C. S. Lewis in Context*. Kent, Ohio: Kent State University Press, 1994. Chapters 2 and 3 concern the Ransom Trilogy.
10. Wolfe, Judith, and Brendan Wolfe, editors. *C. S. Lewis's Perelandra: Reshaping the Image of the Cosmos*. Kent, Ohio: Kent State University Press, 2013.

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*“In [Benedict's] Rule we can distinguish the two elements we have seen in the life of St. Benedict: the knowledge of letters and the search for God. The fundamental fact that stands out in this domain is that one of the principal occupations of the monk is the lectio divina [worshipful reading], which includes meditation: meditari art lagere. Consequently, one must, in the monastery, possess books, know how to write them and read them, and, therefore, if it be necessary, learn how to read... the word bibliotheca, which he uses in referring to books read in Lent, can mean, for him, the Bible. But St. Benedict evidently takes for granted the existence of a library, and a fairly extensive one at that...”*

*– Jean Leclercq, The Love of Learning and the Desire for God (Fordham, 1961)*

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## Appendix E: Study Tips

Section VI of the [GCS Student Handbook](#) has several pages of helpful study tips and resources for research which I highly commend for your consideration. In addition to those pages, it's important, early in your graduate career, to give thoughtful attention to three other topics: reading well, writing well, and time management.

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### READING WELL

You have already been developing a “Christian theological instinct,” as Torrance describes it (more on this in Week 1). Reading well is, at heart, a practice of reading in accord with that Christian theological instinct.

You already know how to read well. If you have taken BI501 Hermeneutics, you have already formally studied how to read the Bible well. What you have learned about reading the Bible may also be helpful in reading other kinds of works.

Part of reading well is the practice of choosing intentionally how to read. A volume of poetry is meant to be read differently than a multi-volume narrative history. In order to establish a lifelong habit of reading well, one must become accustomed to assessing the genre and nature of a text and then adopting the reading strategy most appropriate to it and to our own goals for engaging with it.

Here are some of my guidelines:

- Reading for *information* is different from reading for *understanding*. The former is skimming; the latter is ineradicably personal. Personal understanding is, for the Christian reader, a practice of Christian theological instinct. It cannot be done by Google's bots.
- Just because I start a book doesn't mean I have to finish it.
- Just because I give part of a book a close reading doesn't mean that other parts can't be skimmed.
- If I'm reading well, that matters more than the quality of the book itself. If I'm reading well, I'll get more out of a bad book than if I read a good book poorly.
- Read as if the author is sitting next to me. This will help me read with a hermeneutic of charity rather than a hermeneutic of suspicion.
- If a book I ought to read seems uninteresting, the problem is not the book, but that it's just not the right time for me to be reading it. Another time I will gain more from it. Books are patient.
- Reading the Bible is not like other books, for its Author just shows up. And He talks back. (Other authors talk back when they show up at conferences.)

That is just to begin to scratch the surface. If you like those, you might appreciate two classics on how to read:

- Mortimer J. Adler and Charles Van Doren, *How to Read a Book* (Touchstone, 1972).
- C. S. Lewis, *An Experiment in Criticism* (Cambridge University Press, 1961).

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*"The familiar faces of my books welcomed me. I threw myself into my reading chair and gazed around me with pleasure. All my old friends present—there in spirit, ready to talk with me any moment when I was in the mood, making no claim upon my attention when I was not."* George MacDonald

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What matters is *that* you are reading, not *how much* you read.

Abraham Lincoln had very few books in his home (and less than a year of formal schooling), but he read *well*.

That the letter kills, but the Spirit gives life, is not an argument for less reading, but for reading well.

Historically, literacy and reading have followed the gospel wherever it has transformed a culture. Christians are not just people of The Book, but people of books, for they have awakened to a desire to love God with all of their minds and to proclaim the unity of truth across the entire circle of reality. We know we can sail to the ends of the Earth and not fall off the edge, for we have confidence in the Lordship of Christ over all of life.

Ray Bradbury's *Fahrenheit 451* is frequently taken as a warning about censorship, yet Bradbury's chief concern was far more profound than the banning of books. On his own account, Bradbury set out to protest a culture in which people prefer television and other distractions and so choose not to read at all. Today, to awaken us from the self-imposed soft-censorship of our digital screens, we are more in need of *Fahrenheit 451* than ever.

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*"In pessimistic moments (usually after watching television), I wonder if Western civilization has moved into a new Dark Age in which we sit around all day in recliner chairs listening to rap music, watching game shows and Survivor reruns, and eating fast food. Perhaps the church will be called on again, as it was in the original Dark Ages, to preserve literature and learning."*

– Philip Yancey, in the foreword to Scott Larsen, *Indelible Ink: 22 Prominent Christian Leaders Discuss the Books That Shape Their Faith* (Waterbrook Press, 2003).

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## WRITING WELL

Some writing tips for the Final Paper, or research papers in general.

1. Expect to take some time to write a cogent argument concisely. Pascal once apologized to a friend that he had not had the time to write a shorter letter. You will not have room for lengthy introductions, descriptive narration, concluding recapitulations, or long block quotations. Avoid meaningless filler fluff. **Omit needless words.** Strive for clarity and concision.
2. Condense the point of your entire analysis into a crystal-clear sentence to let the reader know where you are headed (this may even be your first sentence, though it is written last). Then pare away everything that does not lead the reader toward that goal; everything that does not directly support that argument. This is all the more important in a short essay. How does each sentence of your essay relate to and develop your thesis? Outline the overall progression of your essay to tighten it and ensure its coherence. After the initial writing, expect to re-read and revise in several iterations until your essay appears slim and trim, tight and cogent.
3. What is your **thesis** (i.e., the point of your argument)? Is it clearly indicated? Is it clear and specific? Are special terms or concepts explained concisely, or defined with precision? Make your argument a clear target; do not leave your reader guessing at your interpretation, unable to read between the lines, unsure of your position. The latter may be good politics, but it is not good essay writing!
4. Support your assertions with **specific evidence**; forceful emphasis and simple repetition do not count as persuasion.
5. Anticipate and identify counter-arguments and evaluate their soundness if you can. An argument that simplistically ignores contrary evidence is weakened, not strengthened.
6. Restrict quotations; respect your reader. Assume that you are writing for a broadly informed reader (or classmate) who has a general familiarity with the texts under discussion, yet who may be inclined to disagree with you. This means that you must construct a friendly argument, not parrot a summary.
7. *What if I love quotations and feel that they're essential to my purpose?* The default assumption – to assume your reader's familiarity with the text – still holds. Yet sometimes, as with Torrance and Lewis, it's helpful to preserve the “voice” of an author. In such cases, quotations may be justified. Yet for each quotation, instead of placing the quotation in the main text, in most cases it is generally better to summarize the chief point you are making with it, add a footnote citation, and then place the quotation into the footnote after the citation.

8. *What if I am micro-analyzing a passage? May I include a quotation then?* Yes, of course. These are tips, not rules; you get to make the choice.
9. Guard against grammatical ambiguities: “I listened to an album in my dorm room. It was full of violence and sex.”
10. Avoid **weasel words** (“doubtless,” “likely,” “seems to,” “appears to be,” “possibly,” “may have been,” etc.). Take responsibility. Look the reader in the eye. Put your head out over the parapet.
11. Avoid generalized “**reification**,” where a writer hides his fuzzy thinking with over-generalized, abstract terms (e.g., “Science says...,” “History has shown...” etc., instead of “This person at this time said...” etc.). Be particular, specific, and concrete.
12. Avoid **logical fallacies**. For example, can you spot anything wrong with this argument? “Witches float; wood also floats; therefore witches are made of wood; ducks also float; so if someone weighs as much as a duck, she is made of wood, and therefore—a witch.” *Monty Python and the Holy Grail*  
– For an introduction to the common fallacies, see “Love is a Fallacy,” in *The Many Loves of Dobie Gillis*, by Max Shulman (1951).
13. Acknowledge all sources used with citations and a bibliography!
14. Prefer the **active voice**. “I wrecked the car” is much better than “The car has been wrecked.” The passive voice is a neat way to avoid responsibility. For reasons not “to be explored” here, it is quite prevalent in academic writing.
15. Avoid lifeless, awkward, and affected intellectualisms (“it could well be argued...”).
16. For a serious essay, avoid over-relaxed colloquialisms common in ordinary conversation (“hey man, just look, it’s like this here...”). Colloquial speech is fine in forum interaction, but not for the Final Paper unless it’s part of a dialogue or other creative writing style.
17. To ensure a smooth and natural style, have a friend read your essay aloud and see how it sounds. Develop your own written “voice.”



## 18. Some frequently troublesome contractions and pronouns:

<i>their</i>	<i>they're</i>
<i>its</i>	<i>it's</i>
<i>his, hers</i>	
Note the similarity between "their," "its," "his" and "hers." All are possessive pronouns, none have <u>apostrophes</u> .	Both "it's" and "they're" use the apostrophe to show the contraction of two separate words; e.g., "it is."

*Use apostrophes to denote a missing letter or letters;  
and to denote possession; but never ever to denote plurals.*

## 19. Some frequently troublesome SINGULAR / PLURAL forms:

<b>Singular</b>	<b>Plural</b>
<i>species</i>	<i>species</i>
<i>criterion</i>	<i>criteria</i>
<i>phenomenon</i>	<i>phenomena</i>

If you want to hone your writing skills, one way to begin is Andrew T. LePeau, *Write Better: A Lifelong Editor on Craft, Art, and Spirituality* (IVP Books, 2019).

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*"The slovenliness of our language makes it easier for us to have foolish thoughts."  
George Orwell*

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## TIME MANAGEMENT

We know that, if you are like most GCS students, you have a full-time job. Time is at a premium as you work to serve our Lord and care for church members and for your families. We seek to help you use your time more efficiently in this course through integrating reading, research, reflection, and experiential learning, and by creating ties to other GCS courses that will make your efforts in this course pay off in others, and vice-versa. The goal has been to design this course to be flexible enough for part-time students, comprehensive enough for full-time students, and rigorous enough to be accredited.

The development of time management skills by every student plays an essential part in making this balancing act successful. Online learning can become really stressful, especially if you have taken on too many commitments. This online class can be very helpful because you have some flexibility to schedule your class participation based on the days and times that you have available. On the other hand, you will find that, unlike correspondence courses of independent study, any online class is very demanding. Online courses are not like a traditional residential class where you coast each week, just passively sitting through three hours of classes, then plunge into around-the-clock study sessions before paper due-dates, midterms and finals. The work for this class is smooth and steady, and you'll need to establish a weekly rhythm you can maintain all semester long.

Get on a schedule from the start where you complete the assignments early, so that you will have sufficient margin for those unexpected contingencies of life. Nothing makes your work go more smoothly in this course than to get ahead early and stay ahead.

DEADLINES are for real! This course is **not self-paced**. Rather, each assignment has a very specific deadline. To do well in this class, you must be aware of the deadlines for each assignment. To receive credit for an assignment, you must complete the assignment by the specified deadline.

Manage deadlines by WORKING AHEAD. Although not self-paced, this course is **self-scheduled**. You can do the work for this class up to *one week in advance*. That is a great way to keep from having to worry about the deadlines! I strongly encourage you to work at least a couple of days ahead — because life is full of surprises!

As far as due dates are concerned, the week “officially” starts on Monday (e.g., Monday, Week N) and ends at 11 pm on *Saturday of the following week* (e.g., Saturday, Week N+1). And the assignments first become available on the Monday of the preceding week, Week N-1, which means *you have nearly three weeks* to complete them. But this does not mean that your actual schedule should be the same as the due dates! At the very least, you need to allow time for interaction with other students.

Commit to a weekly schedule that works for you and gives you the margin you need, considering your family and ministry and other responsibilities.

*Effort:* For the most part, grading for this class is based on effort: if you complete the required work in a timely manner, following the guidelines for each assignment, you can receive an A. I would be absolutely delighted to give each and every student in this class an A. To see why I set it up this way, check out Paul Graham's thoughts on grading as "The Lesson to Unlearn": <http://paulgraham.com/lesson.html>.

After each Gradebook Declaration, you can track your progress toward the grade you want — see the weekly progress table at the end of [Appendix A](#), "Grading Standards."

*Your safety net: work in advance!*

To hone time management skills, a practical title is Eviatar Zerubavel, *The Clockwork Muse* (Harvard University, 1999). For the heart of the matter, ponder a classic booklet by Charles Hummel, *Tyranny of the Urgent* (InterVarsity, 1994).

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*"Never put off until tomorrow what you can do the day after tomorrow." - Mark Twain*

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## Appendix F: Estimated Workload

To do well in this course, plan now to invest a total of 140-150 hours, or about 14-15 hours per week of reading, participating on the website, and writing papers.<sup>2</sup> The first table below is reproduced from the main section of the Syllabus. Subsequent tables break out the totals with additional information to show the basis for these estimates.

Weekly Assignments Table				
Weekly Assignments	Hrs/wk	Schedule A*	Schedule B*	Pts/wk
<b>1. Perspective Seminar</b> 5 hrs		Mondays 11 pm	Mondays 11 pm	10 pts
Presentation	2 hrs			
Reading	2 hrs			
Forum	1.5 hrs			
<b>2. Application Seminar</b> 5 hrs		Thursdays 11 pm	Thursdays 11 pm	10 pts
Presentation	2 hrs			
Reading	2 hrs			
Forum	1.5 hrs			
<b>3. Love in the Cosmos</b>	1 hrs	Fridays 11 pm	Thursdays 11 pm	1 pts
<b>4. Conversation OR Website Task</b> (1 hr)	1 hrs	Fridays 11 pm	Fridays 11 pm	2 pts
<b>5. Last Words</b> 1 hr	1 hrs	Fridays 11 pm	Fridays 11 pm	2 pts
<b>Totals</b>	<b>14 hrs</b>	<i>*Sample schedules; yours may vary.</i>		<b>25 pts</b>

<sup>2</sup> The U.S. Department of Education requires that each semester unit of graduate credit represents at least 45 hours of student work. Since GCS courses are three units each, a student should expect to put in a minimum of 135 hours, and up to 150 hours of work for each course – 12 to 15 hours each week.

Summary Workload – Overall	
Assignment	Total semester hours
Orientation	15 hrs
Weekly Assignments	130 hrs
Final paper	5 hrs
<b>Total</b>	<b>150 hrs</b>

Workload of Orientation***		
Assignment	Points	Total hrs
Autobiographical Sketch	5 pts	1 hrs
Commit to a regular weekly schedule	5 pts	1 hrs
Love and the Cosmos reflection	5 pts	1 hrs
Syllabus Assignment	5 pts	7 hrs
Orientation lectures: introductions to T. F. Torrance and C. S. Lewis	10 pts	5 hrs
<b>Total</b>	<b>25 pts</b>	<b>15 hrs</b>

To ease the workload the first week, complete the Orientation Assignment before the semester begins. Allow 8 hours to read the Course Packet and make thoughtful decisions to plan your semester schedule and workload.

Summary Workload – Weekly Assignments		
Assignment	Hrs/wk	Total hours
Perspective and Application Presentations	4 hrs/wk	40 hrs
Perspective and Application Forums	3 hrs/wk	30 hrs
Additional readings	3 hrs/wk	30 hrs
Love and the Cosmos	1 hrs/wk	10 hrs
Conversation OR Website task	1 hrs/wk	10 hrs

Summary Workload – Weekly Assignments		
Assignment	Hrs/wk	Total hours
Last Words	1 hrs/wk	10 hrs
	<b>13 hrs/wk</b>	<b>130 hrs</b>

Workload of Assigned Readings (Books)				
Assigned reading	Sections	Length (pp)	pp/hr	Hours
Excerpts from <b>Torrance, <i>Space, Time and Resurrection; The Trinitarian Faith</i></b> and other sources, including Lewis	Excerpts	220	10	22 hrs
<b>Lewis, <i>Out of the Silent Planet</i></b>	All	160	20	8 hrs
<b>Total hours / semester</b>				<b>30 hrs</b>
<b>Ave. hrs. / week</b>	<b>2.73 hrs</b>			

Because the work by C. S. Lewis is fiction, it has a faster reading rate (80 pp./week) than the books by T. F. Torrance (25 pp. per week). The audiobook of *Out of the Silent Planet* is 5 hours and 31 minutes long.

Workload of Seminar Videos: Perspectives and Applications					
	Length (pp)	pp/hr	Hrs/wk	Weeks	Total hrs
<b>Perspective video</b>	20	10	2 hrs/wk	10 wks	20 hrs
<b>Application video</b>	20	10	2 hrs/wk	10 wks	20 hrs
<b>Total</b>			<b>4 hrs/wk</b>		<b>40 hrs</b>

Workload of Seminar Forums			
	Hrs/wk	Weeks	Total hrs
<b>Perspective Forum</b>	1.5 hrs/wk	10 wks	15 hrs

Workload of Seminar Forums			
	Hrs/wk	Weeks	Total hrs
Application Forum	1.5 hrs/wk	10 wks	15 hrs
<b>Total</b>	<b>3 hrs/wk</b>		<b>30 hrs</b>

Workload of Seminar Readings			
	Length (pp)	pp/hr	Hrs/wk
Additional Readings	30	10	3 hrs/wk
<b>Total</b>			<b>3 hrs/wk</b>

Workload of Misc. Weekly Assignments			
Activity	Hrs/wk	Weeks	Total hrs
Love and the Cosmos	1 hrs/wk	10 wks	10 hrs
Conversations	1 hrs/wk	6 wks	6 hrs
Website Tasks	1 hrs/wk	4 wks	4 hrs
Last Words	1 hrs/wk	10 wks	10 hrs
<b>Total</b>	<b>3 hrs/wk</b>		<b>30 hrs</b>

Workload of Final Paper	
	Total hrs
Drafting weekly versions of the “Love and the Cosmos” essay in light of readings in <i>Space, Time and Resurrection</i> and <i>The Trinitarian Faith</i> and other sources. (during semester; counted above)	0 hrs
Revising, updating essay: 4 pages at 2 hrs/page	8 hrs
<b>Total</b>	<b>8 hrs</b>



Workload summary***		
Assignment	Hours	% of grade
Orientation assignment, reading syllabus, watching introductions to Torrance and Lewis	15 hrs	6.67%
Reading/watching the seminar videos	40 hrs	46.66%
Reading the textbooks	40 hrs	20%
Posting reflections on the forums*	20 hrs	
Posting replies to others' posts on the forums*	15 hrs	
Conversations with scientists	6 hrs	16.67%
Website Tasks*	4 hrs	
Final paper	5 hrs	10%
Total – 13-15 hours each week	145 hrs	100%

\* For the grade percent column, this activity is included with another row as a package deal. For a more detailed breakdown of percentages based on points, see the table entitled “Points/Assignment and Total Points/Percentages” in the main section of the Syllabus.

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*“Blinded by the brilliance of the laws of motion, the laws of optics, the calculus, the concept of universal gravitation, the rigorous experimentation, the methodological success, we have seldom wondered whether the discovery of the laws of nature was all Newton had in mind. We have often missed the religious nature of his quest and taken the stunningly successful by-products for his primary goal. But Newton wished to look through nature to see God, and it was not false modesty when in old age he said he had been only like a boy at the seashore picking up now and again a smoother pebble or a prettier shell than usual while the great ocean of Truth lay all undiscovered before him.... Newton’s goal was a unified system of God and nature.”*

– Betty Jo Dobbs, *Janus Faces of Genius* (1991)

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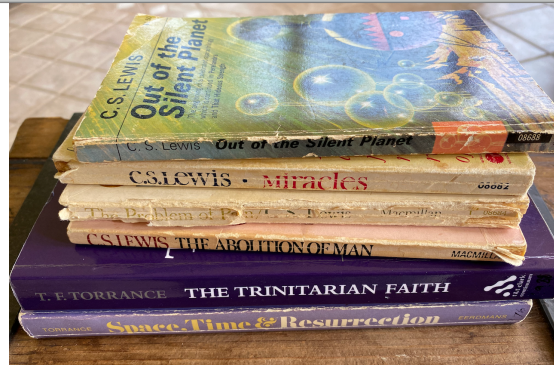
## Appendix G: Additional Readings – Explanation and Schedule

Required Books					
Assigned reading	\$	# weeks used	Length (pp)	pp/hr	Hours
<b>Torrance, <i>Space, Time and Resurrection</i>; Torrance, <i>The Trinitarian Faith</i>; and other excerpts from Torrance and Lewis</b>	\$30.77	10 wks	220 pp.	10	22 hrs
	\$26.81				
<b>Lewis, <i>Out of the Silent Planet</i></b>	\$9.44	2 wks	160 pp.	20	8 hrs
<b>Lewis, <i>Miracles</i>*</b>	\$9.59			20	0 hrs
<b>Lewis, <i>Mere Christianity</i>*</b>	\$10.00			20	0 hrs
<b>Lewis, <i>Abolition of Man</i>*</b>	\$9.19			20	0 hrs
<b>Lewis, <i>The Problem of Pain</i>*</b>	\$10.99			20	0 hrs
<b>Total</b>	<b>\$106.79</b>	<b>12 wks</b>	<b>380 pp.</b>		<b>30 hrs</b>
* Optional to purchase; assigned excerpts will be provided.					

### Which of these is an all-you-can-eat buffet?



One of the finest meals I've ever enjoyed was at the Argyll Hotel on the island of Iona. Definitely not a buffet!



These are ingredients for your own culinary masterpiece! Neither is this an all-you-can-eat buffet, since we will read carefully chosen selections.

Except for *Out of the Silent Planet*, we will not read these books in their entirety. Reading *well* is quite different than reading *much*, or just plowing through a huge book

in order to reach the back cover. Just as a fine restaurant may serve up smaller portions than an all-you-can-eat buffet, these required books are the ingredients for your culinary masterpiece, if combined with artistry and skill. We will select carefully-chosen excerpts for close readings, with the goal of cultivating the skill of reading well. To aid close reading, on some weeks annotations to the more difficult terms and passages will be provided, as if we were reading the passages together.

The two primary texts by Thomas F. Torrance are *Space, Time and Resurrection* and *The Trinitarian Faith*. It is worthwhile to master these two classic texts over many years. In this course we will develop the skill of engaging Torrance with close reading of excerpts, rather than attempting to read them in their entirety.

1. Torrance, Thomas F. *Space, Time and Resurrection (STR)*. Edinburgh: Handsel Press, 1976; #1976-331. ISBN: 9780905312002.
  - *Length*: 209 pp.
  - *Price*: about \$30.77 at online booksellers. Available in many editions, including Apple Books and Kindle.
  - *Comment*: *Space, Time and Resurrection* is a relatively accessible, classic work of Torrance's theology, which also exemplifies Torrance's perspectives on the relations between theology and science.
2. Torrance, Thomas F. *The Trinitarian Faith: The Evangelical Theology of the Ancient Catholic Church*. Edinburgh: T&T Clark, 1988; #1988-489.
  - *Price*: About \$26.81 online for ISBN 0567665585 edition. Available in many editions, including audio lectures, Apple Books and Kindle.
  - *Length*: 345 pp.
  - *Comment*: In addition to assigned excerpts, select chapters of Torrance's *The Trinitarian Faith* are required for the final essay assignment. *The Trinitarian Faith* is one of Torrance's most challenging texts, of enduring value.
  - *The Trinitarian Faith* is also recommended reading for TH505 Doctrine of the Trinity.

For works by Torrance, click on the "McGrath number" (e.g., #1976-331) to go to the first edition record at [tftorrance.org](http://tftorrance.org). Look in the right margin of that record to find links to all known later editions, translations, digital editions, and original audio lectures, as well as to booksellers via LibraryThing, Amazon, Bookfinder and AbeBooks. The approximate price indicated is based on a recent print edition at Amazon; the other booksellers may offer copies at lower prices.

The first volume of C. S. Lewis' "Ransom Trilogy" requires a different strategy for reading well (other than close reading). It presents insights for faith and science in a storied manner appropriate to its literary character, in contrast to the dense prose of Torrance. Read for the lived experience of the tale, not merely for the didactic portions you can extract and analyze.

3. Lewis, C. S. *Out of the Silent Planet*. New York: Macmillan Publishing Co., 1965. Originally published in 1938.
  - *Length*: 160 pages. The first 84 pages (up through ch. 13) will be assigned in Week 7, and the rest will be assigned in Week 10. For comparison, the entire audiobook is 5 hours, 31 minutes.
  - *Price*: about \$9.44 at online booksellers for ISBN 0743234901 edition. Available in many editions, including Apple Books, Kindle and in audio format.
  - *Comment*: This first volume of C. S. Lewis' Ransom Trilogy illustrates some of the major themes of his extensive engagement with evolution, scientism, materialism, reductionism, ecology and conservation, and other issues of faith and science.
4. Max McLean, "C.S. Lewis On Stage – The Most Reluctant Convert," 2019. 77 minutes. [Amazon US](#). About \$14 at online vendors. Available on many streaming services; available free in the US with Amazon Prime. This video is watched in the Orientation week; please acquire access to it before the semester begins.

We will also read (provided) excerpts from other books by Lewis, including:

5. Lewis, C. S. *The Abolition of Man*; [LibraryThing](#). New York: Macmillan Publishing, 1947. In ch. 3, itself titled "The Abolition of Man," Lewis set out what he believed to be the major theme of the Ransom Trilogy.
6. Lewis, C. S. *The Problem of Pain*; [LibraryThing](#). HarperOne, 2001. ISBN: 978-0060652968. \$10.98. Required in TH507 Theology of C. S. Lewis.
7. Lewis, C. S. *Mere Christianity*; [LibraryThing](#). About \$10 at online booksellers.
8. Lewis, C. S. *Miracles: A Preliminary Study*; [LibraryThing](#). New York, MacMillan Publishing, 1947.

These books are written in compelling, easy to understand, almost conversational style, as only Lewis can do. These are optional to purchase, as PDFs of the assigned pages will be provided.

Bibliographic information indicated above is for the first edition, yet for this course any edition is fine. Please obtain these books before the class begins.

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*"Never lend books; people never return them.  
The only books I have in my library  
are books I have borrowed from others."  
– Anatole France*

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## Cross-References – Not Required

Torrance's dogmatics lectures at the University of Edinburgh, *Incarnation* and *Atonement*, both edited by Robert T. Walker, are among the most readable of Torrance's works. They are required for TH508 Christology of T. F. Torrance. Our reading assignments will sometimes have cross-references to these volumes, which you may have already read. If you have them at hand, they will prove helpful for reference, but they are not required for this class.

1. Torrance, Thomas F. *Incarnation: The Person and Life of Christ*. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2008; [#2008-TFT-1](#).
  - *Price*: about \$33.76 at online booksellers for ISBN 0830824596.
  - Required for TH508 (Christology of T. F. Torrance).
  - *Comment*: In the readings for this course you will find optional cross-references to the following chapters:
    1. Week 2: Torrance, Thomas F. "Introduction to Christology." In *Incarnation: The Person and Life of Christ*, 1-36. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2008; [#2008-TFT-1a](#).
    2. Week 3: Torrance, Thomas F. "The Hypostatic Union." In *Incarnation: The Person and Life of Christ*, 181-234. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2008; [#2008-TFT-1f](#).
    3. Week 9: Torrance, Thomas F. "The Kingdom of Christ and Evil." In *Incarnation: The Person and Life of Christ*, 235-256. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2008; [#2008-TFT-1g](#).
2. Torrance, Thomas F. *Atonement: The Person and Work of Christ*. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2009; [#2009-TFT-1](#).
  - *Price*: about \$34.58 at online booksellers for ISBN 0830824588.
  - Required for TH508 (Christology of T. F. Torrance).
  - *Comment*: In Week 1 of this course, we will read on reserve (no purchase necessary) the Epilogue, "Reconciliation of the Mind: A Theological Meditation Upon the Teaching of St. Paul." In *Atonement: The Person and Work of Christ*, 437-447. Edited by Robert T. Walker. Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2009; [#2009-TFT-1n](#).

(For many weeks, additional optional readings are available. A few of these are indicated in parentheses on subsequent pages.)

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*"A room without books is like a body without a soul." Cicero*

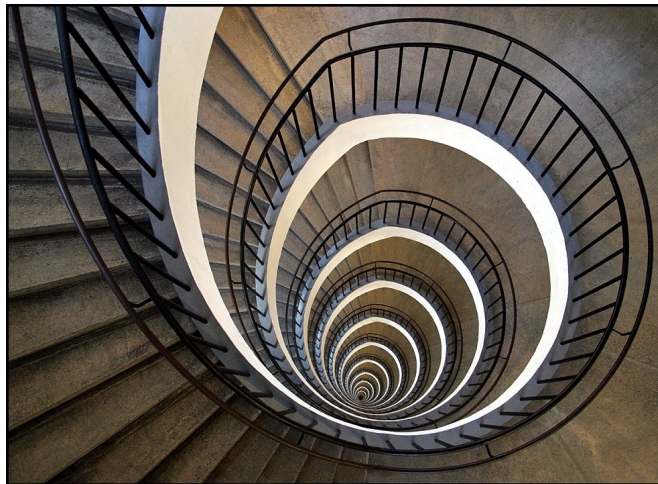
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## Special Note on Reading Torrance and the Sequence of this Course

The two seminars each week, a “Perspective” seminar and an “Application” seminar, complement one another. The main “perspective” is introduced and then applied to concrete examples. The applications are often historical case studies, but also represent episodes in current science. The historical examples offer us an opportunity to think through the connections with the perspectives without the baggage or cultural filters often found with present-day debates. And as they are concrete and actual episodes, they may help us avoid an approach to the issues based upon abstractions alone.

In addition, from week to week, the topics are sequential, building one upon the other, to make an ever-climbing spiral. A topic introduced in one week may receive additional mentions during following weeks, while waiting to receive focal attention in a later week. This is why the videos are best watched in sequence, and why earlier ones should not be missed. By the end of the semester, you will acquire the tools to read Torrance and Lewis with greater understanding, and to apply a Trinitarian “theological instinct” to the natural sciences.



*The sequence of this course is an ever-climbing spiral.  
Credit: hecanonsstall.blogspot.com*

Many students find Torrance difficult to read. Why? We will take ten weeks to elucidate the basic perspectives, but reading Torrance confronts us with all of them almost at once! Why are his sentences so long? Like Barth in some respects (although Barth is easier), Torrance writes (and thinks) holistically. He keeps so many factors in relation to one another, sometimes even juxtaposed in clauses in the same sentence. But it is that knack for keeping thoughts in relation, even complex thoughts in complex relations, that makes his writing so powerful for those who need it. In other words, his writing is the antithesis of a postulatory-deductive framework abstractly applied to his topic. And his topics are inherently multi-disciplinary – never dealing with theology alone, but always in relation to philosophy of science and natural science in general. So one cannot read him without simultaneously and brutally encountering issues in theological

science, philosophy of science, and natural science all wound up in the same paragraph or sentence. (Eeek.) His writing may seem at times impenetrably dense until one can tease apart all the different strands within one holistic passage.

This is why we will read him in bits and pieces. Even then, it is difficult to select the bits and pieces to read, and also the sequence for reading them. We will start at the end of *Ground and Grammar of Theology*, hoping the theological context may be more familiar to participants in this class. *Space, Time, and Resurrection* is more of a theological work than, say, *Theological Science*, where many of these subjects are teased out at length. So these two works (STR and GGT) have a lower barrier to access than other books which Torrance devoted specifically to the nature of science or to natural science. N. T. Wright, for example, said that reading *Space, Time, and Resurrection* in his early studies was a formative, life-changing experience for him. So you can be confident that you will find reading Torrance worth the effort you put into it.

This course is about developing your own Trinitarian “theological instinct.” To do that, in the ten weeks of the course we will tease apart the main strands that occur everywhere in Torrance’s thinking. After this course, you will be prepared to pick up any of Torrance’s books and read them with recognition of the units of thought that he is holding in relation together. In other words, at that time you will have acquired a sense of the “grammar” of his thought, and you will find yourself reading him not for information, per se, but in order to indwell and absorb that grammar of thought for oneself.

Torrance and Lewis overlap so much in their theology that we can use Lewis as a bridge to enter into Torrance. In this course, Torrance’s “grammar” of thinking theologically sets our agenda, but we use Lewis to help us get on board so that we will then be able to realize how profound Torrance’s work (and Lewis’ work) actually is.

So think of this course as a guided preparation to enable you to be able to read Torrance (and Lewis) on your own for the rest of your life. That’s my hope. Yes, it will be worth it. No, it ought not be done on one’s own, brute force, like taking a plunge in a frozen lake. Rather, I hope the perspectives of this course will ease you in, and it will get progressively easier. One possible subtitle for this course might be “How to read the natural theology of T. F. Torrance (and C. S. Lewis).”

I remember giving up piano lessons when I saw my friends playing football outside. I never got to the point where the piano became part of me, where it became natural to express myself through it. I wish I had stuck with it. Reading Barth or Torrance is like learning a musical instrument or a new language – it takes time before it’s actually part of you. But it’s worth it.

## SEMESTER READINGS AT A GLANCE (PROVISIONAL)

WEEK		VIDEOS	READINGS***	Total pp.
0	1/2	Registration. Orientation.	Read the Syllabus and Appendices from the Course Packet. Complete the Week 1 Orientation assignments.	
1	1/14	Orientation #1: Torrance		
		Orientation #2: Lewis		
2	1/20	Thinking Theologically	"Reconciliation of Mind," in <i>Atonement</i> , 437-447.	45 pp.
		Flat Earth Myth		
3	1/27	Language and Reality	TFT, <i>Reality and Evangelical Theology</i> , ch. 2.	34 pp.
		The Galileo Affair	Biblical interpretation exercise. (CSL, "Language of Religion" CR)	7 pp.
4	2/3	Knowing <i>Kata-physin</i>	STR: ch. 8a, 159-169	42 pp.
		Interdisciplinary Relations		
5	2/10	Being and Relation	STR: 77-79 (laws); 88-93 (time); ch. 6a: 123-135.	37 pp.
		Relational Physics (& Genesis 1)	Lewis, "Religion & Science" ( <i>GITD</i> )	3 pp.
6	2/17	Contingent Order		
		Geohistory		
7	2/24	God & Nature	C. S. Lewis, <i>OSP</i> , first 84 pages. ( <i>Problem of Pain</i> , ch 1: 13-25.)	84 pp.
		<i>Out of the Silent Planet</i>		
8	3/2	Stratified Reality	C. S. Lewis, <i>OSP</i> ; pp. 85-160.	75 pp.
		Many Dimensions	Stratified reality handout. (CSL "The Seeing Eye," CR 167-176)	
9	3/9	Dualism	STR: 43-45, ch. 8c: 179-193	40 pp.
		Dilemmas of Design		
10	3/16	Natural Theology	STR: ix-xiii (Selections: Annie Dillard)	46 pp.
		Evolution		
11	3/23	The Priest of Creation	CSL, <i>Abolition of Man</i> , ch 3: 67-91.	
		New Creation	STR: ch 4c: 102-105, ch 7b: 150-155, ch 8b: 174-177	



12-13	3/30	All regular assignments for weeks 1-10 and extra-credit book essays are due by Monday, April 7, 11 pm. The final paper, which is an ongoing essay revised in draft form throughout the semester, is due April 9, 2020.
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## Appendix H: Seminar Videos – Combined Outline

### WEEK 2



#### **Perspective: Thinking Theologically**

1. Course Introduction
  - What kind of course is this? • Stratification of Truth • Course outline • Why study the past? • Love and the Cosmos
2. Models of God and Nature
3. Science and Religion
4. Why Focus on T. F. Torrance and C. S. Lewis?
5. Christian Theological Instinct
6. Conclusion



#### **Application: Flat Earth Myth**

1. Introduction
2. How did they know the spherical shape of the Earth?
3. Did it last?
4. Nicole Oresme, 14th century
5. What about Columbus?
6. The True Flat Earth Myth
7. How could we be so wrong?

### WEEK 3



#### **Perspective: Language and Reality**

1. Introduction
2. Incarnation and Trinity
3. Theology and the Sciences
4. Propositional Knowledge
5. Science and the Sciences
6. Conclusion



#### **Application: Galileo: A Guided Tour**

1. Foundations of Mathematical Physics
2. Early Years
3. The Telescope and Starry Messenger
4. Triumph in Rome
5. Scripture and Copernicanism
6. A New Pope and a New Dialogue
7. The Trial of Galileo
8. Later Years

## WEEK 4



### **Perspective: Knowing Kata-physin**

1. Introduction
2. *Kata physin*
3. C. S. Lewis on knowing
4. The Known and the Unknown
5. Interdisciplinary Relations
6. Conclusion



### **Application: Interdisciplinary Relations**

1. Introduction
2. The Tuscan Setting
3. Art and Astronomy
4. Music and Astronomy
5. Theology and Astronomy
6. Conclusion (with additional theological reflections)

## WEEK 5



### **Perspective: Being and Relation**

1. Introduction
2. "Why should equations fly?"
3. Incarnation and Creation
4. Ancient and Medieval Space and Time
5. Newtonian Space and Time
6. Conclusion



### **Application: Relational Physics (and Genesis 1)**

1. Introduction
2. Maxwell and Field Theory
3. Einstein and Relativity
4. The Big Bang
5. Genesis 1 and Cosmology
6. Conclusion

## WEEK 6

### **Perspective: Divine Freedom and Contingent Order**

1. Introduction
2. Drama or Necessity?
3. Contingent Order
4. Three streams: Science, History of Science, Theology
5. Three illustrations: Plurality of Worlds, Anthropic Principle, Geohistory.
6. Conclusion



## Application: Geohistory

	1	Martin Rudwick	Permian Mass Extinction
	2	Georges Cuvier	Reality of Extinction
	3		Directionalist Synthesis
	4	Louis Agassiz	The Devonian Controversy
	5		Ice Ages
	6	Observations on Science	
	7	Afterword	

## WEEK 7

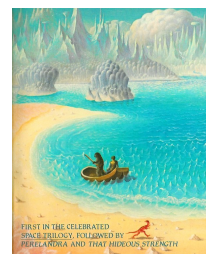


### **Perspective: Imagining God and Nature**

1. Introduction
2. Review the Models
3. Models in more detail
4. Test the Models
5. Filters, Paradigms, and Imaginaries
6. Conclusion

## Application: Preparing to read *Out of the Silent Planet*

1. Mars Today
2. Mars in History
3. The Ransom Trilogy
4. *Out of the Silent Planet*
5. What to look for
6. Conclusion

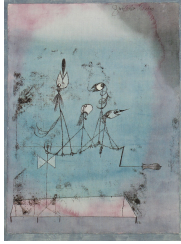


## WEEK 8



### **Perspective: Stratified Reality**

1. Introduction
2. What is the stratification of reality?
3. Michael Polanyi
4. T. F. Torrance
5. Stratified Reality and the Resurrection
6. Conclusion



### **Application: Reality in Many Dimensions**

1. Introduction
2. The Multi-Level Rose
3. Science and Miracles (Scientism)
4. Science and the Imagination (Reductionism)
5. Science and History
6. Conclusion

## **WEEK 9**



### **Perspective: Dualism**

1. Introduction
2. Dualism – Overview
3. Dualism before Newton
4. Newton as Dualistic Theologian
5. Dualism after Newton
6. Conclusion



### **Application: Dilemmas of Design**

1. Introduction
2. Argument from Design
3. From Deism to Atheism
4. Evolutionism and Progress
5. Intelligent Design
6. Conclusion

## **WEEK 10**



### **Perspective: Natural Theology**

1. Introduction
2. Episodes of Natural Theology
3. Purposes of Natural Theology
4. *Nein!* Barth vs. Brunner
5. Trinitarian Natural Theology
6. Conclusion



### **Application: Evolution**

1. Introduction
2. Charles Darwin
3. Young Earth Creation
4. Evolutionary Creation
5. Queries and Theses
6. Conclusion

## Week 11



### **Perspective: Priest of Creation**

1. Introduction
2. Priest of Creation
3. Technology and Magic
4. The Church and Ecology
5. Image of God
6. Conclusion



### **Application: New Creation**

1. Introduction
2. First fruits of the New Creation
3. The Resurrection and Medicine
4. The Resurrection and Animals
5. The Resurrection and the Cosmos
6. Conclusion



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## Appendix I: Gradebook Declarations

After nearly every assignment, students will make a Gradebook Declaration. A “Gradebook Declaration” is a true-false quiz in which students affirm that they have completed the various components of an assignment. For example, a Gradebook Declaration for the Autobiographical Sketch, one of the Week 1 Orientation assignments, might look like this:

### **Complete your Gradebook Declaration:**

Go to the Gradebook Declaration quiz for this assignment and answer the following question:

*True or False? I have posted an Autobiographical Sketch of at least 300 words, with my name in the title, in the Orientation Forum. (5 points)*

Gradebook Declarations serve several purposes: they encourage students to **take responsibility** for maintaining a clear and comprehensive picture in their minds of course **requirements** and of their **progress** in completing those assignments, and they **reduce student anxiety** about grades by documenting current status (see the Weekly Progress table at the end of [Appendix A](#), “Grading Standards”).

Gradebook Declarations include True/False questions, one question for each segment of the assignment. Make a Gradebook Declaration as soon as you have completed any segment of the assignment. Gradebook Declarations may be retaken as often as you like during the open period, so you can go back in and add credit for later steps in the assignment as soon as you finish them. Don’t forget to make them, or delay making a partial declaration until an assignment is complete (in case something happens and you miss the deadline). Gradebook Declarations cannot be made after 11 pm on the Saturday of the week following the assignment. Gradebook Declarations are subject to the Honor Code for this Course, as explained in [Appendix J](#).

*Word Count and Spell Check:* Some assignments stipulate a word count and spell check. Most word processors nowadays will do these for you, so you may want to get into the habit of composing offline in your word processor, and then copying and pasting the final text into the forum. An online option is described in [Appendix Z](#), “Word Counts and Spell Check.”



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## Appendix J: Honor Code

There are four primary applications of the Honor Code for this course: Gradebook Declarations, Plagiarism, Course Etiquette, and Academic Freedom. Consult the Appendices indicated below for further discussions on each of these topics.

### **1. Gradebook Declarations.**

You are responsible for recording the completion of most of your assignments in the gradebook. You do this under an Honor Code, which means you will honestly represent your efforts when you report your work. See [Appendix I](#), “Gradebook Declarations.”

NEVER complete a Gradebook declaration before the assignment is completed! For example, do not declare that you have posted a reflection when you have only written that essay in a document on your computer but have not yet uploaded it.

I will closely monitor the Gradebook and compare it with forum postings. If any irregularity appears, all of the student’s previous assignments will be closely re-checked. So, please do not abuse this system. It is not worth the risk.

### **2. Plagiarism.**

In addition, this Honor Code requires that you must not commit any form of plagiarism in writing your final paper or forum posts. Plagiarism is representing the words, ideas, or work of someone else as if they were your own. It does not matter whether this is done intentionally or accidentally. In general, any quote of more than five words in a row should be put within quote marks, and the source noted. See [Appendix K](#), “How to Avoid Plagiarism.”

*Consequences.* If you make a false gradebook declaration or commit any form of plagiarism, you will receive a zero for that assignment and your final grade in the class will be lowered one letter grade. For example, if you would have received an “A” at the end of the semester, you will be given a “B,” and so on. The penalty for a second infraction is a failure of the entire course. See the Academic Catalog, section V.K.1.

Violations of the Honor Code will be treated severely; no exceptions. I understand the sense of desperation that sometimes drives people to make poor decisions. However, the very fabric of this course depends upon student integrity in following the Honor Code, so the Honor Code must be enforced with impartiality. There will be no exceptions, not even for extenuating circumstances. Please, just don’t do it!

*Not sure?* Confusion is not a legitimate excuse. Please feel free to ask questions! If you have any questions about what constitutes plagiarism or any doubts about the grade you have recorded for yourself in the gradebook, please send me an email at that time. It is much better to be safe than sorry — so if there is anything you are uncertain about regarding the work you have done or the circumstances in which you are reporting the completion of your work, please check with me.

*Really?* You mean that I could have my semester grade lowered by one letter if I cut-and-paste a sentence or two from another source into my paper, and forget to put it in quotation marks or add a bibliographic citation? Yes. Practice disciplined research and writing habits so that you will not accidentally make such a huge mistake!

### **3. Course Etiquette.**

In pledging to observe this Honor Code, you are committing to adhere to the standards of courtesy and respect toward others described in [Appendix L](#), “Course Etiquette.”

### **4. Academic Freedom.**

In pledging to observe this Honor Code, you are committing to adhere to the standards of intellectual freedom described in [Appendix M](#), “Academic Freedom.”

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*“Always do right. This will gratify some people and astonish the rest.” — Mark Twain*

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## Appendix K: How to Avoid Plagiarism

More than 5 words in a row from a single source without quotation marks and a citation is plagiarism.

*Tip:* One of the best ways to avoid accidental plagiarism is to write your papers and other assignments in a creative style. If you rephrase content into a dialogue format, for example, as a fictional conversation, it will be more difficult to be guilty of unintentional “copy and paste” and “identical twin” forms of plagiarism. Or you could write in the style of a sermon, a prayerful meditation, or a letter to a friend.

*You mean I don’t have to write my Forum reflections in academic prose?* Right! Indeed, adopting a creative writing style is likely to require more original thought in processing the materials, as well as to be more interesting to others, and as a consequence may engender more interaction in the replies.

The art of avoiding plagiarism is one of the most difficult aspects of writing well. In principle, it is so easy to avoid plagiarism: CREDIT YOUR SOURCES! In practice, this requires discipline and care. If you use or rely upon materials that came from another source — text or images — then make sure that you credit the source fully.

### *Quoting and avoiding “Copy and Paste” plagiarism*

Sometimes you may want to quote someone word for word; this is **quoting**. “Copy and Paste” plagiarism occurs when one fails to cite a quote or image, usually unintentionally. Record citations from the beginning, as you are reading and taking notes, *before* you copy and paste from your notes into your paper!

### *Paraphrasing and avoiding “Identical Twin” plagiarism*

In most cases you will “reshape the content in your own words”; this is **paraphrasing**. In both quoting and paraphrasing you must credit your source with an appropriate bibliographic citation. Failure to do so is plagiarism, even for paraphrases. Moreover, changing some words without reshaping the content in your own way is still plagiarism, not paraphrasing, even if you cite the source! Failure to cite is only one form of plagiarism; plagiarism also occurs if one omits quotation marks because of slight changes to the text. This constitutes “identical twin plagiarism.”

*How much do I have to change the wording for it to count as a paraphrase, as “reshaping in my own words”?*

Answer: The “5 words in a row” guideline (above) doesn’t apply in this case. Would a reader be able to distinguish your paraphrase from the original, if they were read aloud a half hour apart? Paraphrasing requires thoughtful consideration. Avoiding “identical twin plagiarism” is perhaps the most common temptation new writers face, because it may take an unexpectedly lengthy stretch of time to process the original texts and indwell the meanings enough to make the insights one’s own. The difficulty of avoiding plagiarism of this sort is a chief reason why writing is such hard, exacting work. Writing

requires personal knowing, commitment and judgment, not robotic collation or word frequency analysis. Reshaping content in your own words is nearly impossible when you're feeling the pressure of working under a deadline. If you are having trouble assimilating a work into your own idiom and language, consider adopting a writing style in a different genre than the source being cited (see the *Tip* at the top).

I like how the University of Indiana helps their students learn to tell the difference between appropriate paraphrasing and plagiarism, so you might find their website helpful in clarifying this issue:

<https://wts.indiana.edu/writing-guides/plagiarism.html>

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*"They copied all they could copy, but they couldn't copy my mind. So I left 'em sweatin' and stealin', a year and a half behind."*  
— Rudyard Kipling

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## Appendix L: Course Etiquette

### **Personalize the forums**

In an online course, somedays it may seem that you are working alone, in isolation in front of a computer, all by yourself. But it's not true: this course is designed to facilitate student-to-student interaction! So when you feel out of touch, make a change happen by relating to others on the forums.

### **Make your posts personal**

Here's an example that may seem trivial but is actually important: When you reply to someone on the forums, please say "Hi Rebecca" or "Hi Mike" or whatever their name might be. That is the only way you will really start to learn names of the people in the class, and it will help set a personal tone in your interactions.

### **Make the forums thoughtful**

The forums, like all other class communications, are confidential and not to be shared outside of class without permission.

One of the chief reasons for this is because they are places of thought-in-the-making. To later quote someone's incompletely formed thoughts would be to bear false witness against them. Dare to engage in authentic, thoughtful dialogue on the forums. If you see someone changing their mind as a result of dialogue on the forum, take that as a sign that they are participating in the forums as intended.

Another reason is that students may share real-life ministry experiences that should not be made public. Confidentiality is essential.

### **Tone**

In ordinary human conversation, basic courtesy is most evident in tone of voice, rather than in the actual words one says. Communicating in writing is very, very tricky, because it's really hard to be understood clearly without the aid of body gestures, voice inflections, and all the forms of nonverbal communication we take for granted in face to face conversations! This is why everyone needs to make a special effort in online communications to be courteous. Courtesy and respect are as important a part of communication as the content or point of view we want to express.

Here's a basic rule of thumb for online writing:

*Imagine that your readers will initially picture you writing with a scowl.*

If that's the case, then how can you frame your posts so that they will instead hear you speaking with a soft voice, and recognize that you have a twinkle in your eye? You might find it helpful to have someone outside of class read your post out loud before you submit it. Listen to see if they get the tone – but even then, they have an advantage, for they already know you. Is the "tone" you intend obvious from your words alone?

### **Reporting problems**

If you find something in the forums that strikes you as upsetting or unacceptable in either tone or content, please be sure to let me know about it as soon as possible. Usually this kind of thing is the result of some kind of accident or misunderstanding, and I will make sure that it gets cleared up as soon as possible — so please let me know right away if something has been posted in the forums that you believe is inappropriate for a class discussion.

### **Reading and replying**

Very often people will read postings in a forum but not make a reply. So if no one responds to one of your reflections, please do not take it as some sort of snub. Usually every reflection eventually receives at least one reply, but many people read the posts without necessarily posting a reply.

*Tip:* If you give your posts a creative and unexpected title, you may end up receiving more replies!

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*“As human beings, our job in life is to help people realize how rare and valuable each one of us really is, that each of us has something that no one else has—or ever will have—something inside that is unique to all time. It’s our job to encourage each other to discover that uniqueness and to provide ways of developing its expression.”*

*– Fred Rogers, The World According to Mister Rogers*

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## Appendix M: Academic Freedom

In contrast to most discussions of science and religion, this course is devoted to elucidating perspectives on faith and science from the starting point of the tradition of Nicene theological reflection upon the Incarnation and Trinity. In this course, we seek to cut through and behind many science and religion controversies by means of critical appreciation of the perspectives of two 20th-century representatives of the Nicene tradition, Thomas F. Torrance and C. S. Lewis. The overall course design has assumed the common goal of a deeper understanding of their views.

Science and religion has always been a controversial topic. Disagreement on controversial issues is to be expected. No matter what your views on any issue encountered in this course, you will be treated with courtesy and respect. Our primary goal is to better *understand* the views of Torrance and Lewis; you will not be compelled to *agree*.

Significance of Science
Support for Apologetics
Support for Atheism
Non-overlapping inquiries
Mutually-beneficial dialogue
And more...

Views on Origins
Young Earth Creationism
Progressive Creation
Intelligent Design
Evolutionary Creation
And more...

Even if we consider modern evangelical Christians on their own, and set aside wider secular and global cultures, disagreements on science and religion prevail. As suggested in the list above-left, many evangelicals regard science as significant primarily in terms of its alleged use in apologetic arguments, or, conversely, look upon it with suspicion as tainted altogether by the prominence of so-called scientific atheists. In the matter of origins (above-right), to take one of the chief (but by no means most profound) aspects of science and religion relations, evangelical viewpoints comprise an astonishing diversity of positions.

This course will assume, as a matter of course, that Torrance and Lewis came down most clearly for some version of the last options listed (“Mutually-beneficial dialogue,” and “Evolutionary Creation”), although, to take as an example the latter, they were each more interested in the particulars of *how* one holds to an evolutionary understanding rather than in *whether* one holds to evolution in the narrow scientific sense of descent from common ancestors.

But the purpose of this course is not to persuade you of evolution, of Big Bang cosmology, or of any other specific side in this or that modern controversy. Again, the



purpose of this course (and the point of our conversations in the forums) is not to dissuade you from holding any of your positions, but rather to invite you to explore whether you can deepen your own perspectives by coming to a better understanding of the views of Torrance and Lewis. To strive for a deep understanding supports rather than undermines a *critical engagement* to refine, reject, apply or extend their insights. And even an accurate *understanding* of the views of Torrance and Lewis is a surprisingly challenging task in itself.

In the forums and in your final paper, I hope that you will develop and express any views on evolution, Big Bang cosmology, and/or any other specific debates, not for the sake of seeking to persuade others of them, but rather for the sake of helping yourself and others draw insight and application from Torrance and Lewis. In the forums and your final paper, you are welcome to argue in favor of positions different from those of Torrance or Lewis or the views adopted by this course. That is not contrary to the primary goal: namely, showing that you are progressing in your *understanding* of Torrance's and Lewis' views, and helping others to do so as well.

Grading is based on effort and the quality of thought, evidence and reasoning, not on the conclusions reached. An excellent grade on the final paper, for example, does not necessarily imply that the instructor (nor GCS, nor GCI) would agree with the paper's thesis or all aspects of a student's conclusions.

Some students may come to the end of the course and discover that they have been persuaded by Torrance and Lewis and will henceforth approach issues of science and religion in a new way. Or some may hold diverging conclusions altogether but appreciate that, by coming to understand the distinctive perspectives of Torrance and Lewis, they have deepened their own understanding. Or, as the case may be, some may continue on their lifelong journey of exploring science and religion without coming down on any side, for it is possible to complete this course with suspended judgment regarding any final views on various particular issues. Refraining from premature judgment is an intellectual virtue! I do hope, however, that the free discussion and open interaction we experience in this course will help you begin to articulate your own general perspectives, to construct your own creational theology (see the Course Objectives).

As the instructor, I am happy to state my personal agreement with the GCI Statement of Beliefs; see [www.gci.org/aboutus/beliefs](http://www.gci.org/aboutus/beliefs). As I hope will become evident throughout the course, I am also profoundly grateful to, deeply appreciative of, and in substantial critical agreement with both Torrance and Lewis on perspectives of faith and science. It is my joy to invite you to join me in the intellectual journey of this course! I pray that it may serve you well in preparing for lifelong worship, reflection, and ministry.

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## GCS STATEMENT ON ACADEMIC FREEDOM

The GCS statement on Academic Freedom includes these three paragraphs, which I believe are of particular relevance to this course:

“Academic freedom allows for the study of a broad spectrum of Christian beliefs, as we look to understand the work of the formative church in the first century and various ensuing interpretations given through the history of the church. Though there are many divergent paths taken in theological expositions on various topics, many of which are speculative, we emphasize that God has made himself known through the Incarnation of his Son and the indwelling of his Spirit.

“Academic freedom enables faculty members and students to pursue understanding of truth that holds firm to the centrality of Jesus Christ in our lives. GCS claims the institutional freedom to identify itself with Incarnational Trinitarian faith, and maintains the academic freedom to pursue the truth of faith in every field of life and of history with God. Thus, GCS affirms the freedom of scholarly inquiry into every field of knowledge. We believe that the truth is its own advocate with us in our freedom to pursue the objectivity of its intelligibility in all our academic enterprises.

“GCS advertises itself and attracts students by offering education from a specific theological perspective. Students expect our courses to be biblically based, theologically sound, and representative of the tenets of our sponsoring denomination, Grace Communion International. The Statement of Beliefs of GCI provides identity for GCS and guides the content of our courses. Courses may (and often should) discuss the reasons that some people disagree with Trinitarian theology and GCI beliefs. Faculty members may express alternative views on perspectives of theology and some GCI beliefs, but the course itself should be in agreement with GCI beliefs.”

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*“Religion cannot be coerced.” Tertullian*

*Cited in Robert Louis Wilkin, Liberty in the Things of God:  
The Christian Origins of Religious Freedom (Yale, 2019)*

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## Appendix N: Weekly Assignments – Overview

Each of the 10 regular weeks of the semester has a rhythm of five regularly recurring assignments, worth a total of 25 points per week. Recall the *Weekly Assignments Summary Table* in the Syllabus:

Weekly Assignments Table				
Weekly Assignments	Hrs/wk	Schedule A* (3 dys/wk)	Schedule B* (2 dys/wk)	Pts/wk
<b>1. Perspective Seminar</b> 5 hrs		Monday 11 pm	Monday 11 pm	10 pts
Presentation	2 hrs			
Reading	1.5 hrs			
Forum	1.5 hrs			
<b>2. Application Seminar</b> 5 hrs		Thursday 11 pm	Thursday 11 pm	10 pts
Presentation	2 hrs			
Reading	1.5 hrs			
Forum	1.5 hrs			
<b>3. Love in the Cosmos</b>	1 hrs	Saturday 11 pm	Thursday 11 pm	1 pts
<b>4. Conversation OR Website Task</b> (1 hr)	1 hrs	Saturday 11 pm	Monday 11 pm	2 pts
<b>5. Last Words</b> 1 hr	1 hrs	Saturday 11 pm	Thursday 11 pm	2 pts
<b>Totals</b>	<b>13 hrs</b>	<i>*Sample schedules; yours may vary.</i>		<b>25 pts</b>

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## SEMINARS: PERSPECTIVES AND APPLICATIONS

Examine the first column of the *Weekly Assignments Summary Table*. Each week you have two assignments that simulate for classroom seminars: a “Perspective Assignment” and an “Application Assignment.” These assignments each have three components: a video presentation, additional reading, plus forum interaction.

The video presentation is typically in the format of a narrated video slide presentation with a duration of about 90 minutes, and/or as a PDF of the slides and script. Plan to take 2 hours to watch each lecture, with breaks in between sections to stretch your legs, get a cup of coffee, and allow yourself time for mental processing. Because each lecture includes many quotations from Torrance and Lewis, think of each assignment as a long seminar class, as if we were discussing common readings in detail. But instead of a large classroom, imagine that we are doing seminars at my home: Recorded presentations are “*living room chats*” more than “lectures,” in that I record them in my home with life going on around me, rather than seeking out a sound booth for pristine recording. I hope this gives them a more accessible and conversational feel; for my part, I am imagining talking to you in front of me as I record them. Imagine that we’re reading the texts together and talking about them line-by-line; this will explain why there are many quotations in these videos. Think of them as practice in how to read closely. While watching the video, I recommend opening the PDF script in a separate screen, or downloading it to follow along. The animations and builds in the video help you to think visually. In addition, the slower pace of quotations being read aloud may increase reading comprehension compared with just reading the script alone.

Workload: Perspectives and Applications Videos					
	Length (pp)	pp/hr	Hrs/wk	Weeks	Total hrs
<b>Perspective video</b>	20	10	2 hrs/wk	10 wks	20 hrs
<b>Application video</b>	20	10	2 hrs/wk	10 wks	20 hrs
<b>Total</b>			<b>4 hrs/wk</b>		<b>40 hrs</b>

*Perspective Video.* The first video each week is the first component of the Perspective seminar. This video typically introduces a new perspective on faith and science, drawing upon the Incarnational and Trinitarian theology of T. F. Torrance and C. S. Lewis. In addition to watching or reading the Perspective video, the Perspective Seminar also includes additional reading and forum interaction.

*Application Video.* The second video each week is the first component of the Application seminar. By extending the week’s perspective to new contexts or exploring it in greater detail, the Application seminar typically repeats and reinforces understanding of the week’s perspective. In the Application seminar, we consider more

concretely additional misconceptions that underlie widespread caricatures of an alleged conflict between science and religion so that you will be prepared to assist those who are troubled by science and faith issues. In addition to watching or reading the Application video, the Application Seminar also includes additional reading and forum interaction.

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## OPTIONAL: DOXOLOGICAL SCIENCE ACTIVITY

Many weeks there is an optional “doxological science activity.” Each activity may relate in some way to the perspective under study for that week. The purpose of these brief activities is to complement academic study with a personal and devotional mode of engagement with science. By reading them, or taking time to actually do them, you will develop the habit of practicing a “doxological” perspective on creation, as introduced in the Perspective Video for Week 2 and “[Appendix S: Conversations with Creation Workers](#).” Perhaps you will find these activities also suitable for church or youth groups, or even as sermon illustrations.

These activities are entirely optional. There is a 0.5 point bonus for completing any of these activities. You may complete them at any time until the final week of the semester.

To complete an activity, read and conduct any exercise, complete any handout, watch any video, or do any other activity it describes. Then post a short reflection in the weekly Doxological Science Forum considering what you learned, how the activity relates to the perspectives of this course, how it contributes to your appreciation of faith and science, and/or whether you can envision a scenario where it might be helpful to use in ministry.

Complete the Doxological Science Gradebook Declaration to claim your bonus:

1. *True or False? I have read the optional Doxological Science Activity for this week, and completed any exercise, handout, video or other activity it described. I have posted a reflection in the Doxological Science Forum on this week's Doxological Science Activity. (0.5 bonus point)*

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## FORUMS

### *Presentation Forums*

Each presentation for the week has a companion forum where you will interact with other students and the instructor about that week's perspective and application. The presentations should be watched or read in their entirety before interacting on the forums.

Workload of Presentation Forums			
Presentation forum activities	Hrs/wk	Weeks	Total hrs
Perspective Forum reflection and interactions	1.5 hrs/wk	10 wks	15 hrs
Application Forum reflection and interactions	1.5 hrs/wk	10 wks	15 hrs
<b>Total</b>	<b>3 hrs/wk</b>		<b>30 hrs</b>

In summary, each week you will post one reflection of your own to both forums (total of two reflections):

- (1) the Perspective Forum, which accompanies the first presentation; and
- (2) the Application Forum, which accompanies the second presentation.

You will also post thoughtful replies to at least two other student's reflections in each presentation forum (total of at least four replies for both forums). A "thoughtful" reply must contain a kernel of thought. Dare to do some thinking out loud. Make them personal, thoughtful, and authentic. Replies are more than cheerleading, although it is certainly appropriate to encourage your fellow students as well!

I encourage you to apply what we learn together to your own experience. Consider various ministry settings in which the materials might be helpful. Remember that the forum discussions are opportunities for other students to learn from you and, just as importantly, for you to learn from them.

Establish a weekly rhythm that fosters discussion, for we cannot have a discussion if your comments are late.

### *Other Forums*

In addition to the Perspective Forum and the Application Forum, there are some additional forums for the course:

- 4 posts: as part of the Week 1 Orientation assignments, you will post an autobiographical sketch, weekly schedule, and responses to the introductions to Torrance and Lewis;
- 2 posts: the Conversation Forum, to post reflections on two conversations with scientists you will conduct during the semester; and
- 10 posts: the Reading Notebook Forum, to post your Notebook entries for the weekly Reading Assignment.
- 10 posts: the weekly Love and the Cosmos forums, to post an initial essay during Orientation, followed by weekly revisions throughout the semester. At the end of the lecture weeks, you will then convert this essay into your final paper.

- 1 post: the “Love and the Cosmos Final” forum, to post the final version of your Love and the Cosmos essay as your semester paper.
- Optional: Doxological Science weekly forums (see above).

<b>Forums used in this Course***</b>				
<b>Forum</b>	<b>Weeks</b>	<b>Number of posts</b>	<b>Semester Points</b>	<b>% of Grade (300 pts total)</b>
<b>Orientation Forums</b>	0-1	4	10 pts	3.33%
<b>Perspective Forum</b>	2-11	10	35 pts	11.67%
<b>Application Forum</b>	2-11	10	35 pts	11.67%
<b>Conversation Forum</b>	4, 5, 6, 7, 8, 9	2	12 pts	4%
<b>Love and the Cosmos forum</b>	1-10	10	10 pts	3.33%
<b>Last Words</b>				0%
<b>Love and the Cosmos final</b>	11-12	1	25 pts	8.33%
<b>Doxological Science (bonus)</b>	2-11	10	0 pts	0%
<b>Total</b>			<b>127 pts</b>	<b>42.33%</b>

As you can see, you will be doing a lot of writing for each other this semester. I strongly believe that interaction with other students in a way that is not mediated by the instructor is one of the chief advantages of an online course compared with a face-to-face classroom where due to time constraints only a few people usually speak. In my experience over many years teaching online, interaction with students in the forums has been the most satisfying aspect.

When you read the posts and comments by others in any forum, pause and do your best to understand where they are coming from. Take advantage of this opportunity to get to know your fellow students; you will be “seeing” a lot of them online through the course of your studies at GCS. You will come to know one another very well! Many students find this student-to-student interaction to be one of their favorite aspects of the course, and of their GCS experience!

Look again at the first column of the Weekly Assignments Summary Table (at the beginning of this Appendix). At the end of each week, you will participate in discussions with the “Last Words” assignment, work on a “Conversation” in which you engage a scientist or creation worker (six weeks during the semester), or alternatively, complete a “Website task”(4 weeks during the semester). These assignments are all described in [Appendix R](#), [Appendix S](#), and [Appendix T](#).

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### *HOURS PER WEEK*

The 2nd column of the Weekly Assignments Summary Table is “Hours per Week.” Some students will complete the course requirements in less total time than indicated here, and some will take more time. A student who reads quickly may be slow in writing, and vice versa. These estimates also assume that you are scheduling coursework at times when you are alert; plan on spending greater amounts of time if you can only work late in the evenings when you are already tired.

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### GOT RHYTHM? SCHEDULES A AND B AND C...

Examine the 3rd and 4th columns of the Weekly Assignments Summary Table, for “Schedule A” and “Schedule B.”

*Got rhythm?* All weekly assignments will be posted in writing, video, or audio each Monday of *the week before*, and are due at 11 p.m. on Saturday of *the following week*. Assignments may be completed up through the end of the following week. Late assignments will not be accepted after this date except in the case of medical emergencies (let me know in real time). The exception to this are the Conversation and Website Task activities, which should be part of your weekly schedule so that you do not fall behind, but which are not officially due until Week 11 (Monday, March 30, 2020, 11 pm).

Commit, here at the beginning of the course, to discipline yourself to observe a regular schedule, like Schedule A or Schedule B (listed in the table), or some other customized “Schedule C” that you devise for yourself. You will be asked to post the weekly schedule that works for you in the Week 1 Orientation forum.

Ideally, it would be best from a learning standpoint to spread the assignments out over the entire week as much as possible. But this is not necessary. For example, if you wish to work only two days a week, you could do the Perspective Seminar assignments on Mondays along with the Conversation or Website Task assignment; and then the Application Seminar assignments on Thursdays along with Love and the Cosmos and Last Words. Or you could attempt all weekly assignments in one marathon 12-hour Saturday session, before the week officially starts (coming back the following week, and the week after, to reply to the posts of others who are not active at



the same time). There is definitely no need to work four days a week or even on Saturdays. Give this careful thought right now. Pause now and write down several possibilities to choose from. The particular schedule you adopt is not as important as that you establish a regular rhythm that works for you and then stick to it throughout the semester.

What is important is (1) to decide upon and establish a regular weekly rhythm, and (2) to allow ample time for others to reply to your posts. By posting your schedule in the Week 1 Orientation Forum for others to see, you are helping others to know when they may reliably expect your posts to appear for them to read and comment upon. Survey the schedules of other students and identify classmates who are likely to be posting at about the same times as you. It is impossible to complete the forum component of the Last Words Assignment, for example, if you have posted your reflections so late that no other students had a chance to reply.

You may also choose to work a week in advance, if you wish. In other words, you have nearly 3 weeks to complete weekly assignments, but don't take that as a license. Rather, commit to a regular schedule and work ahead if you can.

See the "Time Management" section of [Appendix E](#), "Study Tips."

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*"Am I a procrastinator? Well, I don't know; ask me later."  
— Kerry Magruder*

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## Appendix O: The Weekly Perspective Seminars

The Perspective Seminar assignments are described in [Appendix N](#), “Weekly Assignments – Overview.” Go to that Appendix and read its explanation of the Perspective Seminar. Then come back here for detailed instructions to complete it.

Here’s what to do:

1. Watch or read the Perspective Video.
  - The Perspective Seminar introduces a perspective that will be extended with concrete examples or case studies in the same week’s Application Seminar.
  - Why are there are many quotations in the presentations? Think of them as if we were in a seminar class discussing the quoted texts. We’re zeroing in on the quoted passages to discuss them line-by-line. So the Perspective video will prepare you for the additional readings. An alternative title for the videos could be: *“How to read the creational theology of Torrance and Lewis on... (insert title of assigned reading for that week).”*
  - Formats:
    - On average, the videos last about 90 minutes in length. They have builds and animations and other visual effects designed to highlight the focus of attention in a dynamic way that aids understanding. With stopping, starting, rewinding, and a break to clear your head, plan to spend a couple hours per video.
    - PDFs of the slides are also available with a word-for-word scripted narration. These are a faster read, and are word-searchable. Instead of taking notes, you could download the PDF and highlight or comment on it during the video in your favorite PDF reader (e.g., Acrobat, Preview, or PDF Expert).
  - Tips:
    - *For best comprehension, follow along the script while watching the video on screen.* With the video, you will be thinking visually. In addition, the quotations read aloud in the video will be slower than you might read them from the script alone, and give you time to concentrate and catch their deeper meanings.
    - Most students will find the Perspective and Application videos to be dense enough that it will not be possible to multi-task while watching. Learn to approach this course “according to the nature of the material” (*kata-physin*).
    - Let me encourage you not to watch any lecture this semester in one sitting. Take breaks between sections. Get up, stretch your legs. Go warm up your cup of tea or coffee. Give yourself a few moments away from the screen to process what you have just seen and heard. This would be a wise habit to adopt for every video, even the shorter ones, each week of the course.
2. Read the Additional Readings.

These readings are related to the excerpts discussed in the videos. Perhaps they may be a chapter or the larger context that contained the excerpts. Or perhaps they may extend the theme in some way that will make more sense after the video. In general, you will probably wish to complete the additional readings after

watching the video, using the video as the key to the themes of the readings.

3. Write a reflection on the Perspective Seminar forum.  
Each video concludes with a number of reflection questions. Perhaps you'll want to reflect on one or more of these questions, or perhaps some other aspect of the video or readings has seized your attention. In your posts on the forum, feel free to discuss any of the reflection prompts or consider another question entirely. Address your personal impressions of the perspective introduced for this week.
  - A. Does it relate to the tradition of Nicene theology and the central tenets of Incarnational and Trinitarian faith?
  - B. How is it meaningful, helpful, clarifying, or missing the point?
  - C. Do you see ministry scenarios in which it might be applicable?
  - You may wish to compose your reflection offline, where you can monitor the word count and perform a spell check, and where your greatest insights will not vanish if there are internet glitches or power interruptions. It must be spell-checked and a minimum of 300 words long (see [Appendix Z](#), "Word Counts and Spell Check"). You may write in a creative style that will engage other student's replies; it does not have to be academic prose. What counts is the substantive content or points that you convey.
4. Post your reflection to the current week's Perspective Forum.  
If you do not immediately proceed to the next step, make a partial Gradebook Declaration before walking away.
5. Read reflections posted by other students. Post a thoughtful reply to at least two other reflections added by other members of the class in this forum.
  - *If there is a reflection that has not yet received any replies, respond to that reflection first*, before commenting on another. You will appreciate the same courtesy, as *at least one reply* to your reflection is required to complete the forum component of the Last Words assignment.
6. Complete your Perspective Gradebook Declaration. Go to the Gradebook Declaration for this assignment and answer the following questions:
  1. *True or False? I have watched/read the entire Perspective video. (3 pts)*
  2. *True or False? I have read the entire Perspective additional readings. (3 pts)*
  3. *True or False? I have posted a thoughtful, personal and authentic reflection in the Perspective Forum. My reflection is at least 300 words long and has been spell-checked. (3 pts)*
  4. *True or False? I have replied to one or more student's reflections. (1 pt)*
  5. *True or False? I have replied to two or more students' reflections. (1 pt)*

*Note:* If you have replied to two student reflections, answer True to both questions #4 and #5. If you have only replied to one student, and do not have

time right now to make an additional reply, answer True to #4 and False to #5 for partial credit, then return and take the Gradebook Declaration at a later time to revise your answer to question #5.

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*“Remembering that I’ll be dead soon is the most important tool I’ve ever encountered to help me make the big choices in life. Because almost everything — all external expectations, all pride, all fear of embarrassment or failure — these things just fall away in the face of death, leaving only what is truly important. Remembering that you are going to die is the best way I know to avoid the trap of thinking you have something to lose. You are already naked. There is no reason not to follow your heart.”*

*— Steve Jobs, Stanford University commencement address, 2005*

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## Appendix P: Seminar Additional Readings

The Additional Readings are a component of the Perspective and Application Seminar assignments, in addition to watching the video and posting on the forum.

### Read the Seminar's additional texts

The additional texts will be comprised chiefly of excerpts from the required textbooks totaling about 20 pages each week, depending on the difficulty of the reading level. Readings by Torrance are calculated at about 10 pages per hour; readings by Lewis at about 20 pages per hour.

Workload of Reading Notebook Assignments			
	Length (pp)	pp/hr	Hrs/wk
<b>Assigned reading</b> Torrance, "close reading"	20	10	2 hrs/wk
<b>Assigned reading</b> Lewis, "literary reading"	80	20	
<b>Notebook entry (forum)</b>			1 hrs/wk
<b>Total</b>			<b>3 hrs/wk</b>

Although you are free to read ahead, typically, you will read the assigned readings for the week after completing the Perspective presentation.

#### *Literary reading*

While we will conduct close readings for the dense prose of Torrance, we will employ literary readings for Lewis' fiction. The readings from Lewis are literary in genre; not apologetic, theological or philosophical – although they have relevance to apologetics, theology and philosophy. This is drama, not verse-by-verse exegesis. Focus on the sweep of the unfolding story, rather than individual pages, as the object for sustained reflection. The story is lived experience. An audiobook can be an excellent choice for this kind of reading, because it keeps you moving along. You can probably read silently faster than the audiobook, which is 5 ½ hours total (spread over two weeks). Reading aloud is a little slower still, but if you have a friend or partner who would be interested, the Ransom Trilogy, like *Lord of the Rings*, makes a memorable shared read-aloud experience!

#### *Close reading*

Close reading is something you already do all the time! For example, you engage in close reading when you exegete and interpret a dense passage in Paul and try to hold

all sorts of phrases and subclauses in holistic interrelation. If you have preached or taught the first chapter of Ephesians, you'll have no trouble with Torrance!

### *Seminar discussion*

Some of the most rewarding and memorable courses I've ever taken were seminars in which we worked collaboratively through close readings of texts by Plato, Aristotle, Augustine, or Barth, on nearly a line-by-line basis. Something like this is how we will approach Torrance in this course. The Perspective and Application lectures include more than the typical number of quotations from Torrance and Lewis, to better simulate a seminar style of learning. The Torrance excerpts selected for close readings in this assignment will generally be the same ones that are featured in the Perspective and Application lectures for the given week.

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*"Make things as simple as possible, but no simpler."*  
— Albert Einstein

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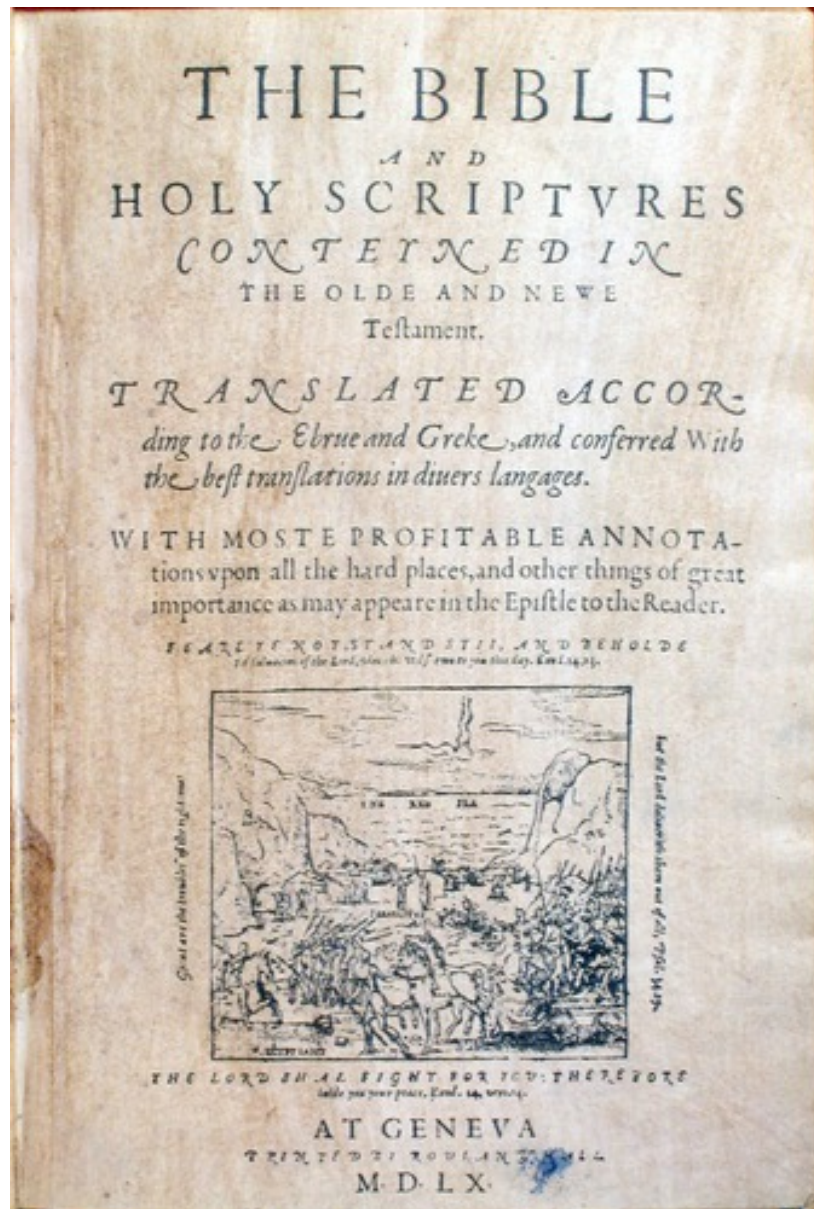
## WRITE A NOTEBOOK ENTRY, PART 1: SEMINAR NOTES FEEDBACK

- Part 1: Length optional, at least a few sentences.

To aid your close reading of short passages, on many weeks I will provide a draft of "annotations upon all the hard places," not unlike the notes of the Geneva Bible (1560). If you haven't heard of the Geneva Bible, you've nevertheless been affected by it: With verse divisions, a small and readable font, cross-references to parallel passages and extensive marginal annotations, the Geneva Bible transformed the way people read scripture and debated theology. With this hand-sized lay study Bible, the word of God spread like a flame to the home and tavern, outside the walls of hierarchical institutions such as the church and university.

How might an approach like Geneva's annotations make the texts of Torrance and Lewis more accessible to our understanding and less intimidating to the new reader? I will provide a draft of some sort, and by providing feedback in a few sentences in your Notebook Entry and forum interaction we will improve them together.





Geneva Bible, 1560. *"With moste profitable annotations vpon all the hard places..."*

Courtesy [Bizzell Bible Collection](#), University of Oklahoma.

The notes will aim to provide the minimum background knowledge necessary to understand the meaning of the text, and thus make the texts of Torrance and Lewis more accessible and less intimidating.

But in some cases the notes may go further, posing questions about the text, or pointing out connections with ministry experience. In this way, the notes will represent something closer to the seminar experience described above, where people read and discuss a book in common, rather than simply notes for individual study.



By the end of the semester, these are some of the possible kinds of annotations our “Seminar Notes” might provide:

- One-sentence explanations of obscure words, or words with a technical meaning.
- Brief descriptions of historical figures or episodes to place them in context.
- Cross-references to other places where Torrance or Lewis discuss a matter more clearly or extensively.
- Questions for reflection or discussion to explore more deeply the ramifications of the text.
- Applications to ministry.

By the way, the notes will be keyed to paragraphs as well as page numbers. Therefore you should experience no difficulties reading a different print edition or using an e-reader that renumbers pages to fit the screen size of the device (e.g., Kindle or Apple Books).

So the first part of your Notebook Entry is to provide a few sentences of feedback for Seminar Notes.

*If a draft of Seminar Notes is NOT provided:*

Suggest terms, names, places or events that warrant annotations or cross-references, if I have not provided Seminar Notes for that week, or if I have provided a draft that omitted particular ones you think it would have been helpful to include. You do NOT need to look up your suggested notes, or write drafts — although you’re welcome to if you wish!

*If a draft of Seminar Notes IS provided:*

If I have provided a draft, include any suggestions of new terms (as above), but also indicate if any notes were helpful or seemed incomplete or unclear.

Based on your feedback, I’ll incorporate as many notes and revisions as I can in an end-of-semester version of the Seminar Notes, which you will be able to download for future reference.

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## WRITE A NOTEBOOK ENTRY, PART 2: MINISTRY REFLECTION

The most important part of your Notebook Entry is the second part, where I invite you to share your reflections on how the text may apply to ministry situations.

- Can you remember past experiences in conversation or ministry where understanding of this text might have been helpful?
- Can you envision future ministry scenarios where having encountered this text might make a difference?
- “Ministry” has a wider and broader scope than might be assumed: Can you identify ways in which this text ministers to you in your ongoing development of a Christian theological instinct and in the evangelization of the culture?

For Torrance and Lewis, scholarly writing was not documenting minutiae in an ivory tower but an essential part of the church’s effort to evangelize the culture, to disentangle and purge intellectual culture from suppositions that are alien to the gospel, in order to transform lives and whole areas of thought, and heal our entire culture. Imagine that we are in a true seminar class discussion, with the overall aim of understanding Torrance and Lewis as evangelists of culture. In this second part of the Notebook Entry, you get to contribute to that discussion.

You might write your ministry reflection most effectively in prose, but feel free to adopt a creative writing style if you wish, such as a prayer for meditation or reading aloud, a sermon idea, or a fictional conversation. *300 words minimum.*

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## NOTEBOOK GRADEBOOK DECLARATION

Go to the Gradebook Declaration quiz for this assignment and answer the following questions:

6. *True or False? I have read all of the required assigned readings for this week. (2 points)*

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## Appendix Q: The Weekly Application Seminar

The Application Seminar is described in [Appendix N](#), “Weekly Assignments – Overview.” First go to that Appendix and read its general explanation of the Application Assignment. Then come back and read this Appendix for detailed instructions to complete it.

Here’s what to do:

1. Watch or read the Application Presentation.
  - The Application Assignment provides one or more case studies that illustrate, extend or apply the perspectives introduced in the Perspective Assignment.
  - Why are there are many quotations in the presentations? Think of them as if we were in a seminar class discussing the quoted texts. We’re zeroing in on the quoted passages to discuss them line-by-line.
  - Formats:
    - The lectures are video presentations lasting about 90 minutes in length. They have builds and animations and other visual effects designed to highlight the focus of attention in a dynamic way that aids understanding. With stopping, starting, rewinding, and a break to clear your head, plan to spend a couple hours per presentation.
    - PDFs of the slide presentation are also available with a word-for-word scripted narration. These are a faster read, and are word-searchable.
  - Tips:
    - *For best comprehension, follow along the script while watching the video on screen.* With the video, you will be thinking visually. In addition, the quotations read aloud in the video will be slower than you might read them from the script alone, and give you time to concentrate and catch their deeper meanings.
    - Most students will find the Perspective and Application lectures to be dense enough that it will not be possible to multi-task while watching. Learn to approach this course “according to the nature of the material” (*kata-physin*).
    - Let me encourage you not to watch any lecture this semester in one sitting. Take breaks between sections. Get up, stretch your legs. Go warm up your cup of tea or coffee. Give yourself a few moments away from the screen to process what you have just seen and heard. This would be a wise habit to adopt for every lecture, each week of the course.
2. Write a reflection on the Application Presentation.
  - A. What are your personal impressions of the episodes and issues discussed this week?
  - B. Did the applications illustrate the relevance of the perspectives introduced earlier?
  - C. Have you encountered related kinds of misconceptions before?
  - D. Did any examples strike a chord with you?

- E. Do you see ministry scenarios in which the week's materials might be applicable?
  - F. What is most significant to you about all you have explored this week?
  - You may wish to compose your reflection offline, where you can monitor the word count and perform a spell check, and where your greatest insights will not vanish if there are internet glitches or power interruptions. It must be spell-checked and a minimum of 300 words long (see [Appendix Z](#), "Word Counts and Spell Check"). You may write in a creative style that will engage other student's replies; it does not have to be academic prose. What counts is the substantive content or points that you convey.
3. Post your reflection to the current week's Application Forum.  
If you do not immediately proceed to the next step, make a partial Gradebook Declaration before walking away.
  4. Read reflections posted by other students. Post a thoughtful, personal and authentic reply to at least two other reflections added by other members of the class in this forum.
    - *If there is a reflection that has not yet received any replies, please respond to that reflection first*, before commenting on another. You will appreciate the same courtesy, as *at least one reply* to your reflection is required to complete the Forum component of the Last Words assignment.
  5. Complete your Application Gradebook Declaration.  
Go to the Gradebook Declaration for this assignment and answer the following questions:
    1. *True or False? I have watched or read the entire Application presentation. (3 points)*
    2. *True or False? I have posted a thoughtful, personal and authentic reflection in the Application Forum. My reflection is at least 300 words long and has been spell-checked. (3 points)*
    3. *True or False? I have replied to one or more student's reflections. (1 point)*
    4. *True or False? I have replied to two or more students' reflections. (1 point)*

*Note: If you have replied to two student reflections, answer True to both questions #3 and #4. If you have only replied to one student, and do not have time right now to make an additional reply, answer True to #3 and False to #4 for partial credit, then return and take the Gradebook Declaration at a later time to revise your answer to question #4.*

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*"Questioning is the most sophisticated and civilised of arts."  
John Stuart Mill*

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## Appendix R: The Weekly Last Words Assignment

Complete the following steps for the Last Words Assignment:

1. Check your Notebook Entry to see if anyone left a comment. Respond to any comments left there. *Note:* Leaving comments on the Notebook Entries of others is optional, but you may benefit from regularly reading them and seeing how your classmates are relating the course materials to various ministry scenarios.
2. Post a final comment to each of your reflections in the two weekly Presentation forums (Perspective and Application). These comments may be short and sweet, but they should show that you have taken into account all of the comments that have been left for you.
  - This step cannot be completed until there is *at least one* comment by another student on each reflection! *Comments by the instructor do not count for this purpose.* If no comment has been left yet by any other student, go to the Week 1 Orientation Forum and examine the schedules posted by other students to see who might be posting at similar times. In general, if this problem recurs, consider whether perhaps you might need to revise your own schedule for future weeks, or try to come up with more personal reflections and more engaging titles for your posts. Meanwhile, go ahead and contact any students you have left replies for to ask if they would be willing to reply to your reflection as well. If necessary, contact the instructor for assistance – I may either allow you to respond to my comment, or extend the due date for this week’s assignment.
3. Make your Gradebook Declarations.  
Go to the Gradebook Declaration quiz for this assignment and answer the following questions:
  - *True or False? I have posted a final reply to my post in this week’s Perspective Forum, taking into account comments left for me by other students. (1 point)*  
*AND*
  - *True or False? I have posted a final reply to my post in this week’s Application Forum, taking into account comments left for me by other students. (1 point).*

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*“If this were the last night of the world  
What would I do?  
What would I do that was different  
Unless it was champagne with you?  
Bruce Cockburn, “Last Night of the World”*

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## Appendix S: Conversations with Creation Workers

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*“Praise the Lord! How good it is to sing praises to our God, how pleasant and fitting to praise him! He determines the number of the stars and calls them each by name. Great is our Lord and mighty in power; his understanding has no limit. He covers the sky with clouds; he supplies the earth with rain and makes grass grow on the hills. He provides food for the cattle and for the young ravens when they call.” – Psalm 147*

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How many sciences are involved in the lines from the Psalm above? Throughout the Psalms (8, 19, 111, 147, etc.), scripture encourages us to meditate on the creation and to seek to understand nature as the work of the Lord. Many traditional hymns and worship songs do so as well (e.g., “This is My Father’s World,” “Joy to the World”). In this assignment you will put these Psalms and worship traditions into practice by conversing with people who are (whether they realize it or not) engaged in understanding the works of our Lord.

Each conversation is split between three weeks: up to 1 hour for preparation and arranging the conversation, up to 1 hour for conducting it, and up to 1 hour to write up your reflection for posting, for a total of 3 hours.

Like the forum interactions, the Conversations assignment is another opportunity to make connections between course material and new ideas for ministry on a practical level. Our experiences in these Conversations may lead us to think of ways to make our churches places where scientists and creation workers feel safe to converse about what matters so much to them, and where they may be led to better appreciate their vocational calling as “priests of Creation.”

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*I will give thanks to the Lord with my whole heart, in the company of the upright, in the congregation. Great are the works of the Lord, studied by all who delight in them. Full of splendor and majesty is his work, and his righteousness endures forever. He has caused his wondrous works to be remembered; the Lord is gracious and merciful.” – Psalm 111*

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### PLAN THE CONVERSATION

Creation workers may be scientists in any field, workers in any area of health care, technology, engineering, conservation or agriculture, biology, chemistry, geosciences, astronomy, meteorology, physics, etc. Schedule conversations with four creation workers during the semester, and meet with each of them for about an hour. You may offer to meet them at any location, although it might feel more natural to have a conversation at their workplace.

The list below may give you an idea of the kinds of vocations to seek out. Try to diversify, selecting persons representing a single category no more than once. (Write me if you have a good reason to do otherwise.)

Vocational Categories – Scientists/Creation workers		
Astronomer, Astrophysicist	Physicist	Mechanical / Civil Engineer
Biologist	Aerospace engineer	Meteorologist
Doctor, nurse, physician's assistant, pharmacologist, or other health-care occupation	Environmental scientist, Park Ranger or Conservationist	Chemist, chemical engineer
Geologist, Planetary scientist	K12 Science Educator, Science Museum educator	University-level Science Educator
Science writer, journalist, or librarian	Farmer, Agriculturalist, Gardener, Landscaper	Veterinarian or other animal-care occupation

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## CONDUCT THE INTERVIEW

The goal for the conversation, 30-45 minutes in length, is to listen attentively. Prompt them to tell you their story. If they are not Christians, do not attempt to convert them to the faith. In fact, do not engage in apologetics, and do not even try to answer their questions about faith and science. Of course, they may raise various issues, and if so, keep the conversation on what they think, not on what you think, nor on course materials. This conversation is about *their* story.

*What should you do if they ask about faith and science?* Resolve ahead of time to defer that kind of conversation to a later occasion. A follow-up conversation would be great! If they give you that opportunity, that's wonderful. But reiterate that your present goal is rather to listen, not to speak, to come to a more personal understanding of them as persons, and to better appreciate their interest and satisfaction in their science-related vocation.

*If necessary, explain that if you engage in a science/faith discussion, then the conversation will not count toward the requirement of this assignment!*

You are on a listening mission. Too often conversations follow a “shoot and reload” pattern, where one person is thinking of what he or she will say next (“reloading” in order to “fire off” at the other person’s next pause for breath) rather than listening attentively to the other person.



Instead, think of these “Listening Conversations” as a kind of “oral history,” where the method is to prompt someone to share *their story*, rather than for the interviewer to intrude his or her own ideas or story into the conversation. So for this assignment, there is no shooting and reloading, nor back and forth discussion. The main difference between this Listening Conversation and an oral history is that you will not record or document their responses for sharing with the public as in an actual oral history project.

Perhaps it will help to envision this concrete scenario: Imagine that your church is starting up what is hoped may become an ongoing small group devoted to getting to know scientists and creation workers in the community. What would you need to know about them in order to persuade them to come and share their story?

Think of this Conversation assignment as an opportunity to initiate or deepen a relationship with someone you know, perhaps a member of your church or a common social circle, or a friend of a friend, with whom you have never had a chance to connect on a substantive level. It’s a particularly great opportunity to connect with someone who might feel that their vocation is not of interest to, or related to, “church.”

The questions or topic areas listed on the next page may help you get the conversation started and keep it moving (print it out if you like). Take notes if you wish, to help you remember. But the conversation is informal; you do not need to record it or document their answers.

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## POST A REFLECTION ON THE CONVERSATION

For this assignment, write a reflection about what stood out most to you about the conversation. Summarize the impact the conversation has ON YOU and on your thinking about the scientist/creation worker’s calling.

This is your chance to practice the “doxological” level of Creation, as explained in the first lecture for Week 1.

Your reflection should be at least 300 words. Record at the top the date, time, length, vocational category (from above), and the location of your actual conversation.

Post that reflection in the Conversations Forum. Include in the title your initials and the number of the conversation (1 through 4), e.g. “KM-1: Geologist,” etc. Give it a descriptive title like “KM-2: Park Ranger”; or you can be more creative like “KM-1: A Missouri cave you won’t believe!”

TOPICS TO EXPLORE:		CREATION WORKER CONVERSATION # ____
Date: _____ Time: _____ Location: _____ Vocational category: _____		
<b>Current work</b>	I'm really interested in what you do, and why you do it. How would you explain it to someone like me? (If on-site, ask them to <i>show</i> you.)	
	Who do you work with? Do you work collaboratively? What is that like?	
	Do you work with any kind of instruments or special equipment, as in a laboratory or field kit?	
	Do you have opportunities to explain what you do to professional colleagues? To the public?	
<b>Preparation</b>	What experiences did you have growing up that created a desire for [this]?	
	What kind of education does your job require? Is there a specific degree or certification? How is that achieved?	
	What was that educational pathway like for you?	
<b>Significance</b>	What is the most satisfying thing about being/doing [science] for you?	
	What is the greatest impact of what you do? Who are the people most affected?	
<b>Future</b>	What do you expect your [work, field, life] to be like 5 years from now?	
	What do you tell students or young people who are interested in your field?	
	How will your field be different 25 years from now?	

Conversation posts are scheduled as indicated in the table below.

Week	Task
4	Conversation #1 preparation
5	Conversation #2 preparation
6	Conversation #1 actual
7	Conversation #1 post
8	Conversation #2 actual
9	Conversation #2 post

Browse the growing library of classmates' Conversations at any time to see what others are hearing and how they are responding.

Finally, don't forget to complete the Gradebook Declaration for the Conversation assignment (each question is worth 2 points):

1. *True or False? I have prepared and made arrangements for Conversation #1.*
2. *True or False? I have prepared and made arrangements for Conversation #2.*
3. *True or False? I have conducted the actual Conversation #1. I did not engage in apologetics during this conversation. Rather, I did my best to listen attentively to their story.*
4. *True or False? I have conducted the actual Conversation #2. I did not engage in apologetics during this conversation. Rather, I did my best to listen attentively to their story.*
5. *True or False? I have posted a Conversation #1 reflection in the Conversations Forum of at least 300 words. The name of the post includes my initials and #1. At the top it states the date, time, length, vocational category, and location of the actual conversation.*
6. *True or False? I have posted a Conversation #2 reflection in the Conversations Forum of at least 300 words. The name of the post includes my initials and #2. At the top it states the date, time, length, vocational category, and location of the actual conversation.*

*Note:* As you complete each step of a Conversation (preparation, conducting, and posting), come back to this Gradebook Declaration and update it. The Conversation Gradebook Declaration closes in Week 12 (Monday, April 6, 2020, 11 pm).

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*"Love without conversation is impossible." Mortimer Adler*

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## Appendix T: Website Tasks Assignments

Website Tasks are scheduled as indicated in the table below. They are not officially due until Week 11 (Monday, March 30, 2020, 11 pm).

Task#	Week#	Task description
<b>Task 1</b>	<b>Wk 2</b>	<ul style="list-style-type: none"><li>• For each book listed in the syllabus with a McGrath number, click the link and explore its bibliographic record at <a href="http://tftorrance.org">tftorrance.org</a>.</li><li>• Read the Life of TFT, by Elmer Colyer, <a href="http://tftorrance.org/bio">tftorrance.org/bio</a></li></ul>
<b>Task 2</b>	<b>Wk 3</b>	<ul style="list-style-type: none"><li>• Read the first half of the Reading Guide, <a href="http://tftorrance.org/guide">tftorrance.org/guide</a>. Which of TFT's publications do you want to read next?</li></ul>
<b>Task 3</b>	<b>Wk 10</b>	<ul style="list-style-type: none"><li>• Read the second half of the Reading Guide, <a href="http://tftorrance.org/guide">tftorrance.org/guide</a>. Which of TFT's publications do you want to read next?</li></ul>
<b>Task 4</b>	<b>Wk 11</b>	<ul style="list-style-type: none"><li>• Browse the tables of contents for each issue of <i>Participatio</i>. Select an article from each issue that might interest you, and read its abstract.</li><li>• <i>Optional</i>: Download the article for later reading.</li></ul>

Allow an hour for each Website Task. Each task involves the [tftorrance.org](http://tftorrance.org) website of the Thomas F. Torrance Theological Fellowship.

The T.F. Torrance Theological Fellowship publishes a peer-reviewed online journal, *Participatio*, and holds an annual meeting. It is a Related Scholarly Organization of the American Academy of Religion. The Fellowship defines their mission as:

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*The Thomas F. Torrance Theological Fellowship is a distinctively Christian research organization devoted to the exploration, development, and dissemination of the theology of Thomas F. Torrance and other theologians contributing to this endeavor. The society exists to promote and sustain fellowship and truth-seeking (fides quaerens intellectum) in theological reflection upon the Christian faith, within the mainstream of the Christian Church and tradition in light of the theological legacy of Thomas F. Torrance. We are a Christian fellowship serving the Christian faith and the renewal of the Church of Jesus Christ.*

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The T. F. Torrance Theological Fellowship defines the mission of their website as:

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*Our mission with the website and its resources is to create a hub for an academic community that will stimulate and sustain research carried on in a Torrancean vision.*

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The Website Tasks are designed to familiarize you with this organization and its website and the resources they offer.

- *Optional:* While you're there, click the "Join" link at the top and follow the instructions to request student membership in the TFT Theological Fellowship.
- *Optional:* Add more information to your member profile. See the Help section for a tutorial, [tftorance.org/help](https://tftorance.org/help).
- *Optional:* Complete the guided-practice tutorial, <https://tftorance.org/help>

Finally, don't forget to complete the Gradebook Declaration:

*True or False? I have completed Website Task 1 at [tftorance.com](https://tftorance.com). (2 points)*

*True or False? I have completed Website Task 2 at [tftorance.com](https://tftorance.com). (2 points)*

*True or False? I have completed Website Task 3 at [tftorance.com](https://tftorance.com). (2 points)*

*True or False? I have completed Website Task 4 at [tftorance.com](https://tftorance.com). (2 points)*

*Note:* As you complete each Website task, come back to this Gradebook Declaration and update it. The Website Task Gradebook Declaration closes in Week 12 (Monday, April 6, 2020, 11 pm).

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*"'Why did you do all this for me?' he asked. 'I don't deserve it. I've never done anything for you.' 'You have been my friend,' replied Charlotte. 'That in itself is a tremendous thing.'"*

*— E.B. White, Charlotte's Web*

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## Appendix U: Love and the Cosmos

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### ORIENTATION WEEK

During the Orientation activities for Week 1, you will post an initial reflections on the theme “Love and the Cosmos.” See the [Week 1: Orientation](#) section of the Weekly Schedules for more details.

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### WEEKLY ASSIGNMENT

Each regular week of the course, revise your “Love and the Cosmos” essay from the previous week to incorporate any insights gained from the current week’s material. Post your revised essay in the “Love and the Cosmos” forum for the current week.

Then make your weekly Gradebook Declaration:

*True or False? I have revised my “Love and the Cosmos” essay from last week to incorporate insights from this week’s material and posted it in the “Love and the Cosmos” forum for this week. (1 point)*

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### FINAL PAPER

The final exam is a take-home paper that counts for 25 points, or 10% of the final grade. It is due by 11 pm Wednesday, April 9, 2020, the 13th week of class. Although Week 12 is devoted to the paper, you will mainly be just revising what you have already written all semester long!

Workload of Final Paper	Total hrs
Review one chapter in TTF, and one in STR	2 hrs
Writing 4 pages at 2 hrs/page	8 hrs
<b>Total</b>	<b>10 hrs</b>

The cover page of the Course Packet offers the unofficial title of the course: “Love and the Cosmos: Trinitarian Perspectives on Science with T. F. Torrance and C. S. Lewis.” In the Week 1 Orientation you posted some initial reflections on the phrase “love and the cosmos.” You have revised this post each week during the course of the semester. Now you will make a final revision of the essay to post in the “Love and the Cosmos Final” forum as your semester paper.

In this 4-page paper,\*\*\* add word count\*\*\* you will deepen your reflections on the weekly “Love and the Cosmos” essays. For this final revision, look back at the different versions of your essay, week by week, to get a sense of how it has deepened over the course of the semester.

As you review your previous drafts, also review as appropriate the material for each week (presentations, readings, forum discussions) to draw together the perspectives we have explored this semester and the Nicene tradition of the Incarnation and Trinity as elucidated by Torrance and Lewis. Review at least one chapter from *Space, Time and Resurrection* and at least one chapter from *The Trinitarian Faith* that are relevant to your essay. Your essay must cite both of these sources.

According to Torrance, the development of the doctrine of the Trinity in Nicene theology provides a model for scientific knowledge. Does it prompt development of a Trinitarian relational natural theology? What perspectives do you see in STR and TTF that are now part of your own Trinitarian relational natural theology, that will guide you in the future as you think further about issues involving faith and science?

The doctrine of the Trinity is, at bottom, an affirmation that love is the ultimate reality and the fountain of being. The early church came to formulate the doctrines of both the Trinity and the Creation in light of the Incarnation. Yet for most modern people, the words “love” and “cosmos” do not seem to go together. More modern people feel “lost in the cosmos” than “love in the cosmos.”

But did the Incarnation affect the cosmos? The cosmos, this physical universe in which we live, is as much a part of creation as we ourselves. Is there room in the cosmos for love? Is the cosmos a school of love? A place where we can learn what love is, and how to love? Is the cosmos a place where love will come to its full expression?

In other words: What correlations do you see between Trinitarian theology and the perspectives on natural science you have read and encountered in this course? And what light do those correlations shine on “love and the cosmos?”

Revise your “Love and Cosmos” essay one final time. Upload your paper in Word or PDF to the Final link in Week 12. In addition, share your paper with other students in the “Love and the Cosmos Final” forum found in Week 12 for the course. Either post it as an attachment, or slightly reformat it to share in the body of the post, as you wish. And leave comments for other students about what you have learned from them about “Love and the Cosmos” over the course of the semester.

**Format:**

- 12 point font.
- Double-spaced.
- One-inch margins on all sides.

**Length:**



- 4 pages, excluding quotations and bibliography.
- Add additional pages as necessary to compensate for the length of included quotations.

### **Citations and Quotations:**

- Citations of *Space, Time and Resurrection* and *The Trinitarian Faith* must demonstrate familiarity with at least one chapter from each book.
- You do not need to read any sources other than *Space, Time and Resurrection* and *The Trinitarian Faith*; no further background research is required or encouraged.
- Cite every source that you use.
- Citations to sources other than *Space, Time and Resurrection* and *The Trinitarian Faith* should be in footnotes.
- Your first citation to *Space, Time and Resurrection* and *The Trinitarian Faith* should include full bibliographic information to specify which edition you are using. Include the McGrath number obtained from [tftorrance.org](http://tftorrance.org).
- After the first citation, pages in *Space, Time and Resurrection* and *The Trinitarian Faith* may be cited without footnotes by simple parentheses at the end of a sentence like this (STR, pp. 223-225) or (TTF, pp. 223-225).
- If you additionally cite the other texts used in this course, use a full bibliographic citation at the first occurrence, followed by in-text parenthetical references with title abbreviations (e.g., OSP, p. 88).
- Direct quotes should be placed within quotation marks, and cited.
- Set quotations in footnotes, where possible, if they are not essential to the point being made. In any case, do not count quotations toward the required length of the paper.
- If you use additional sources other than *Space, Time and Resurrection* and *The Trinitarian Faith*, include a bibliography of all sources that contributed to the development of the paper, including sources cited but not directly quoted.
- Begin the Bibliography on its own page. It is not included in the 4 pages required length.
- In the Bibliography, list sources alphabetically by the last name of the authors or editors of the texts. There is no need to include books that were not cited; there is no end of relevant books that could be mentioned.
- See the “Writing Well” section of [Appendix E](#), “Study Tips.” For a further guide, see “How to Format a GCS Paper,” posted at <http://www.gcs.edu/course/view.php?id=23>.

Turn it in on time. The Final Paper is due by 11 pm Wednesday, April 9, 2020, the 13th week of class. It will be penalized 10 percent for each day it is late, so only in rare cases will it be advantageous to take an extra day to do a better job. Most GCS students are involved in pastoral work, and emergencies are common in this line of work, so you need to allow for the possibility by working ahead.

There is no gradebook declaration for the Final Paper; rather, the grade will be recorded by the instructor.

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*Consider the words of Qoheleth, the Teacher:*

*“Of making many books there is no end, and much study wearies the body.”*

*Ecclesiastes 12:12*

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## Appendix V: Optional Extra-Credit Book Essays

Up to 4 extra-credit book essays, for up to 8 points each, may be submitted at any time during the semester, up through Monday of the 12th week at 11pm. This option provides flexibility if you have to miss a week, for if you're willing to do some serious reading you can replace about a full week of assignments by completing three extra-credit book essays.

Each book essay must be at least five pages long in double-spaced 12-point type, *excluding quotations* (add additional pages as necessary to compensate for any included quotations). You do not need to read any sources other than the book itself; no further background research is required or encouraged. Cite all sources used, of course, but pages in the book under discussion may be cited without footnotes, by simple parentheses at the end of a sentence like this (pp. 223-225). See the "Writing Well" section of [Appendix E](#), "Study Tips." For a further guide to formatting your book essays, see the instructions for the Final Paper ([Appendix U](#)), and "How to Format a GCS Paper," posted at <http://www.gcs.edu/course/view.php?id=23>.

There are no gradebook declarations for Book Essays; rather, the grade will be recorded by the instructor.

Select your book from the pre-approved titles listed below. (These same titles were listed in the Recommended Books section of the Syllabus.) In addition to the three books about Torrance, you can also make the Ransom Trilogy the subject of one Book Essay if you read all three volumes and consider them together. If you wish to request a different book, there must be a good reason why that book will be more advantageous to you than those listed here. Any substitutions must be on a higher level of difficulty than these. Permission must be obtained for any substitution *in advance*.

1. McGrath, Alister E. *T. F. Torrance: An Intellectual Biography*. Edinburgh: T & T Clark, 1999; [#1999-AEM-1](#). Recommended reading in TH508 Christology of T. F. Torrance.
2. Colyer, Elmer M. *How to Read T.F. Torrance: Understanding His Trinitarian and Scientific Theology*. Downers Grove, Illinois: InterVarsity Press, 2001; [#2001-EC-1](#). Recommended reading in TH508 Christology of T. F. Torrance.
3. Torrance, Thomas F. *Divine and Contingent Order*. Oxford, New York: Oxford University Press, 1981; [#1981-385](#). Available in many editions, including [Logos Bible Software](#) (\$18.99).
4. The complete C. S. Lewis Ransom Trilogy:
  - Lewis, C. S. *Out of the Silent Planet*. New York: Macmillan Publishing Co., 1965. Originally published 1938. 160 pp. Vol. 1 (see above).

- Lewis, C. S. *Perelandra*. New York: Macmillan Publishing Co., 1965. Originally published 1943. 222 pp. Vol. 2.
- Lewis, C. S. *That Hideous Strength*. New York: Macmillan Publishing Co., 1965. 382 pages. Originally published 1945. Vol. 3.

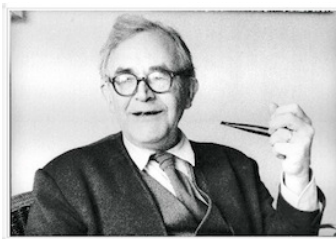
A book essay is not a summary of a book, a mere description, or a traditional book report. Rather than a book *report*, it is closer to a book *review*, which at a minimum:

- (1) explains what the author was trying to achieve, and
- (2) provides an assessment of its success in reaching its intended aims.

For the purpose of this course, a book essay has an implicit argument or point of view. It goes *beyond a book review* to

- (3) consider a book in light of the various perspectives on faith and science encountered in this course.

Imagine that you are conversing with a friend about why the particular book is relevant to faith and science. Explain how the book throws light on the perspectives we have studied. Explain how it has deepened your appreciation for specific ideas introduced in this course. Imagine that after taking this course, you and several friends decide to start a reading group to discuss books dealing with faith and science. Why would the book be worthwhile for participants in such a group?



The angels laugh at old Karl. They laugh at him because he tries to grasp the truth about God in a book of Dogmatics. They laugh at the fact that volume follows volume and each is thicker than the previous one. As they laugh, they say to one another, "Look! Here he comes now with his little pushcart full of volumes of the *Dogmatics*! —and they laugh about the men who write so much about Karl Barth instead of writing about the things he is trying to write about. Truly, the angels laugh.

Barth, quoted in George Casalis,  
*Portrait of Karl Barth* (New York, 1963), 3.

[Get bookmark](#)

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## Appendix W: Top 10 Things to Know About This Course

### 1. Is this is a course in theology or in science? Or something else?

It is a *theology and science* course, which is something different all to itself. No matter what your background in either theology or science, you will learn a lot.

It is definitely not a science course. In fact, there is actually more *history* than what many students expect from a course with the word *science* in the title. If you have experience in science, you might be expecting the course to be much like sidebars added to a science textbook to make it “Christian,” but this is not really what we’re about. We will explore past and present scientific theories, but unlike the sidebars in science textbooks, we will examine them in terms of the theological perspectives of T. F. Torrance and C. S. Lewis.

Nor is it a typical theology course, because it has all these terms and ideas from science, not to mention history! And although the instructor is a historian of science, it’s not a history of science course, either.

So if you are interested in the *relations* between science and theology, between science and philosophy, or science and society, then this course is for you!

### 2. Why are so many case studies selected from the history of science, rather than the present?

OK, this is not a course in the history of science, but the use of history may surprise you. Why? There are several advantages to analyzing past episodes compared with current issues, explained in the first lecture, that justify the historical material:

1. Focus on perspectives
2. The past is a laboratory
3. The past is drama
4. Concrete examples, stories
5. Detect cultural blind spots
6. Address cultural caricatures and myths
7. Enter the worlds of Lewis and Torrance
8. Make science human and personal

I hope you will come to experience each of these benefits for yourself. Nevertheless, by no means are all the case studies taken from history. Some episodes are relatively current, although cutting edge case studies are generally avoided as, in contrast to a science course, it is too soon to assess them with sufficient cultural depth and perspective.

Lewis advises:

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*“Most of all, perhaps, we need intimate knowledge of the past. Not that the past has any magic about it, but because we cannot study the future, and yet need something to set against the present, to remind us that the basic assumptions have been quite different in different periods and that much which seems certain to the uneducated is merely temporary fashion. A man who has lived in many places is not likely to be deceived by the local errors of his native village; the scholar has lived in many times and is therefore in some degree immune from the great cataract of nonsense that pours from the press and the microphone of his own age.”*  
– C. S. Lewis, “Learning in War-Time,” in *The Weight of Glory*

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Torrance explains:

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*“The importance of... scientific questioning is very obvious when we study the history of science, which in all its great stages of advance has entailed radical revision of its premisses and methods. Advances can be made only through new ways of looking at things, through asking daring new questions, but new questions require corresponding changes in language and representation; they require changes in the framework of our concepts and in the logical structure of science itself. They may even call for a new meaning of the word ‘understanding.’ But all that is a part of the pain and awe and excitement of radically new knowledge. The refusal to be bound by the rigid framework of our previous attainments, the capacity to wonder and be open for the radically new, the courage to adapt ourselves to the frighteningly novel, are all involved in the forward leap of scientific research, but in the heart of it lies the readiness to revise the canons of our inquiry, to renounce cherished ideas, to change our mind, to be wide open to question, to repent.”* – T. F. Torrance, *Theological Science*, p. 122

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### **3. Do you enjoy learning new things, or do you feel more comfortable when you already know a lot about the subject?**

Usually when you take a seminary course, you have already taken at least one previous course that relates to it which you start from and build upon. Yet very few students who take this course have had previous courses in “science and religion.” That’s okay — no prior knowledge is necessary — of science, or of “science and religion” — but if you have some experience in either field it will be useful to you. In the same way, no prior knowledge is necessary of the theology of Torrance or Lewis, or of the history of theology, but if you are familiar with these, that will be of use to you. That is, I believe you will be able to connect the course materials to things that interest you, and I also believe you can be confident that everyone participating in the course will be reaching beyond their comfort zone.

In other words: no matter what your background, in this course expect to discover a lot that is new!

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*“Now, I realized that not infrequently books speak of books: it is as if they spoke among themselves. In the light of this reflection, the library seemed all the more disturbing to me. It was then the place of long, centuries-old murmuring, an imperceptible dialogue between one parchment and another, a living thing, a receptacle of powers not to be ruled by a human mind, a treasure of secrets emanated by many minds, surviving the death of those who had produced them or had been their conveyors.” – Umberto Eco, The Name of the Rose*

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The following quotation is a post by Steve Solari, which he contributed to a forum in the very first week of the Spring 2020 semester of this course. It may benefit anyone in thinking about the challenge of learning new concepts, as well as the refined vocabulary that comes with greater understanding:

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*I’ve been humbled by the vocabulary associated with graduate-level theology. My whole life I’ve prided myself on a grasp of grammar, spelling, and vocabulary in general. But I now I’m realizing “vocabulary in general” doesn’t truly exist. For every field of study we’ve encountered and gained some level of understanding, there are many more with terms of their own that are beyond our awareness. Just because I’m familiar with the piezoelectric effect doesn’t mean I have a clue about the Pantocrator.*

*I clearly remember a pastor I had reciting the stages of Jesus’ life and ministry in a quick list — incarnation, life, crucifixion, resurrection, and ascension. I would think, ‘why do you need so many words that overlap, just to talk about Jesus’ life and ministry? Why do theologians have to complicate everything?’ Now I find myself rattling off the same list in the middle of a sermon, since they briefly identify major parts of our Savior’s work and help us to remember they were not collectively one small event. Likewise, in this lesson when we considered pantheism, deism, and theism, I balked a bit. How is a deist different from a theist? Their root words sound practically identical! Why must we complicate things? Then the descriptions of facing realms vs overlapping realms vs intersecting realms — what?? And then I realize: this is new vocabulary for me. Just as it took a while to understand integrals and derivatives in math, and penal substitution and the hypostatic union in theology.*

*I say all this because theology definitely has its own language and I’ve resisted it for a long time. One of my primary drives in ministry is to keep it simple when it comes to our relationship with God, in preaching and teaching. I never want to scare anyone away from God because they think they’ll never understand him enough to know him. But I can study theology and learn the vocabulary and still not thrust it upon people who aren’t ready for it (like I wasn’t). So it’s with humility that I’m going to have to move forward and admit there are words I’m going to have to look up and some of them won’t stick as quickly as other words did when I was a kid. I still struggle to remember the pantheism/deism/theism particulars, and the chart with the moving boundaries between ‘Nature’ and ‘God and Nature’ made sense but I’d never be able to reconstruct that chart without rote memorization. And it drives me crazy that I can’t remember ‘doxological’ for more than a few hours, much less kata physin.*

*But it’s a process. And I suppose it’s necessary. You wouldn’t want a doctor removing your appendix saying to the nurses in the operating room, ‘I’m gonna cut this thing over there, but first I’m gonna move that slimy thing on top of it. Wait, I remember there’s a blood vessel to watch out for — whatchamacallit over here... too many terms. We’ll just call them thing 1 and 2.*



*You hold Thing 1 with a clamp over there, while I cut Thing 2 over here. And make sure he gets enough sleepy juice. We don't want him waking up.' The truth is if you're going to dig into a subject, you need to know the words that describe the topics within it. Once a common language is established, the concepts can build.*

*After all is said and done, I think the application to my ministry will be a more solid understanding of the concepts which I try to simplify in preaching and teaching. I can still say Jesus Christ has two natures, and personally have a deeper understanding of their intersection and significance, without using graduate-level theology terms in the discussion with others. A simplification of a subject understood simply is OK; a simplification of a subject understood deeply is better.*

*I also have to get over my fear of complicating God; one does not need an extensive vocabulary to personally experience the Father, Son, and Spirit and nothing will change that. The simplest mind can relate to him just as well as the deeply-educated one. On the other hand, we also know that growing in grace and knowledge is never a bad thing. Knowing him is most important, but learning to know more about him is not time wasted.*

*(Shared here with permission. Thanks, Steve.)*

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#### **4. Do you expect this course to be like a correspondence course, or do you expect to work on it at least several different days every week?**

This course is not self-paced, but it is self-scheduled. This distinction is very important to understand!

It is **self-scheduled** because, unlike a regular classroom-based class where you have regular weekly meeting times, there are no mandatory “meeting times” where everyone in this class needs to be online at the same time. To be precise, the class is “asynchronous.” Unlike with a group chat, it is 100% up to you to figure out what your “working schedule” is for this class.

However, the course is **not self-paced** like a correspondence course. It is *asynchronous but coordinated* so that students progress through the course together as a cohort. Because this course is designed around student interaction, everyone must keep up and work in tandem. *It is not independent study!*

You will need *a lot of self-discipline* in order to come up with a regular weekly schedule for this class and stick to it. You can work on the course a little bit each day; or you can work only two days a week if you plan ahead. Plan to work on the class at least several different days every week.

Take another look at the weekly assignments and start thinking about how you can fit this into your other regular commitments. Plan ahead and work ahead whenever

possible. Remember: no late assignments are accepted. You have to be able to stick to the scheduled due dates for each assignment.

See the Time Management section of [Appendix E](#), “Study Tips.”

### **5. Do you like to work in bursts, or slow and steady?**

If you prefer a steady, consistent pace, then you will do well in this class. Rather than relying on a few major assignments like term papers and exams, this course has many smaller assignments each week, which together take the place of papers, exams, class attendance and homework. Unlike classes where most of the emphasis is on the midterm and final exam, this course is based on a regular weekly schedule, with multiple different assignments due each week.

If you prefer to work in creative bursts, you should plan to work ahead! But no late assignments are accepted: you have to be able to stick to the scheduled due dates for each assignment.

### **6. In a new class, do you get off to a quick start, or does your energy build in a gradual crescendo over the course of a semester?**

This course has a completely different rhythm than most classes, which start out slow and reach an intense pace climaxing in the final exam. This course is just the reverse, a decrescendo: The first two weeks are the hardest and take the most time, as you figure out how everything works and what the course is all about. There is no midterm, and the final is a paper you will create by revising a regular weekly essay you have been working on all semester.

### **7. Do you like to express yourself in writing?**

If so, then you will do well in this class! All of your contact with me and with your fellow students will be through writing.

Do you communicate best through non-verbal means, relying upon body language, vocal inflections, and incomplete sentences? If so, then this class offers you an opportunity to improve your writing skills and to practice expressing yourself more clearly through writing. See if a friend will commit to help you work on your writing skills as you work on this class.

You may complete the entire semester without speaking audibly to anyone in the class, without meeting anyone face-to-face. That is why this course is so writing-intensive. Instead of spending many hours each week sitting in a traditional classroom, you will spend the same amount of time writing — for your peers and for yourself.

Nearly all of the writing is interactive. We will rely upon online forums to communicate. You will be posting a variety of writing assignments to the forums every week (short reflections and responses to peers) — and you will be getting lots of support and feedback from the other students and from myself all along the way. Many students find that this interaction is the most fun and positive part of the class.

### **8. Do you appreciate courteous, constructive feedback, or do you get uptight when someone offers you suggestions?**

Many find it challenging to share half-formed thoughts or newly-conceived ideas unless they have enjoyed ample time to live with those thoughts and ideas and process them carefully. If that's the case in person, it's even more challenging to do so when under stressful deadlines or in writing, without the verbal cues and body language that we count on to signal uncertainty, sympathy, fatigue, brain fog, or lack of aggression.

Yet we read in Proverbs that “iron sharpens iron” and that “an honest answer is like a kiss on the lips.” While we will remain always courteous and respectful, we are equally obligated to speak the truth in love. Learn to value frank dialogue, and seek to develop your skills in conducting it. The only alternative is for forum interaction to lose all substance, and degenerate into platitudes, empty generalities, and clichés. That might feel good for a day, but does no one any lasting benefit.

Make forum interactions personal, thoughtful, and authentic. Remember that the forum discussions are confidential; they may not be shared outside of class, and all dialogue threads should be deleted from your computer when class is over (unless you ask for and receive permission from all of those involved). We are creating a safe place for each of us to try out ideas and new-formed thoughts. We wish to share together in intellectual and spiritual development in real time.

Before responding to what someone has written, recognize that they may be having second-thoughts or be mentally revising it at the very moment. Try to apprehend the reality behind the words rather than focusing on statements devoid of personal context. Design your replies to assist in the process of developing thoughts in a fluid situation, rather than by presuming that the other person is fixed in deeply-held unfortunate views.

Commit, like Paul, to “die daily” in the forums and return good for evil, turning away wrath with gentleness. It beats meeting the gladiators any day! And when responding to others, review [Appendix L](#), “Course Etiquette.” Charity for all.

## **9. Do you learn well by reading, or do you learn best by listening to something being explained aloud?**

For some assignments there are downloadable audio files you can listen to or videos you can watch, but much of the time you will learn the material through careful reading. If reading comprehension is not your strong point then you will consider this course reading-intensive.

And even for students who learn easily by reading, some students enjoy the presentation readings very much one week only to find them uninteresting the next, while other students feel just the opposite. Why such a difference in appeal? Probably because different weeks are devoted to different perspectives and topics, and some of these will interest you more than others.

Also, the assigned texts each week are not typical textbooks. If you are used to reading typical college textbooks for theology, science or history, these readings will seem different. The assigned texts are classic sources by two renowned authors, and will still be read by generations to come.

But the bottom line is that to do well in this course you will need to spend several hours each week reading each and every word each and every week. Before the end of the first week of class, message the instructor the first word on this page for one bonus point, as a reward for reading closely. Don't wait to read until late at night when you're tired. And you may need to keep a dictionary at hand (see the [Online Oxford English Dictionary](#), [Dictionary Online](#) or [Bartleby's](#)).

## **10. Do you have reliable Internet access and a secure, virus-free, stable computer?**

Having a reliable computer, a reliable internet connection and a solid backup strategy is an absolute must! You will need a backup plan (e.g., to use a friend's computer) if your computer gets a virus or goes on the glitch. Viruses and computer problems are not acceptable excuses for missed assignment deadlines. So be prepared by working ahead, and factoring in enough time to do the assignments at your local public library.

## **11. Do you find it easy to follow a long list of written directions, in order, without losing track?**

Congratulations! If you have read this far, you should do well in the course!

In a classroom, the instructor may repeat the instructions for assignments several times each week, so if you were not paying attention the first time you will have a second chance. Not so in an online course: to make the reading load easier, I do my best to

write thoroughly but concisely, neither to leave things out, nor to be redundant by repeating the same thing over and over. It's a balancing act and you may find that hard to believe given the length of this Course Packet! And you need to read each page of it.

Remember that each assignment may have smaller steps that must be completed in a particular sequence. Read each page of instructions slowly and completely. Print out assignment instructions if it will help you not lose track or accidentally omit a step.

*Tip:* The detailed course schedule pages have little checklist boxes you can use for this purpose (see sample checklist, next page).

**Okay, this has 11 points, not 10, but which one would you leave out?**

**Which of these Top 11 points is most important to you?**

## SAMPLE WEEKLY CHECKLIST

Assignment	Checklist	Description
Jan 6	This week's assignments open	
<b>Perspective</b> Monday-Tues Jan 13-14 11pm	<input type="checkbox"/> Lecture presentation (2hrs)	<b>Perspective Seminar title</b> • Required readings indicated here. • (Optional readings in parentheses.)
	<input type="checkbox"/> Additional Reading (2 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Lecture presentation (2hrs)	<b>Application Seminar title</b> • Required readings indicated here. • (Optional readings in parentheses.)
	<input type="checkbox"/> Additional Reading (2 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science (optional)	
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Jan 25, 2020	Last date to complete this week's regular assignments.*	

\* Except the Website Task OR Conversation assignment, which are not due until the end of the semester.

Now, here's my tribute to you, and to a crazy semester!

---

*Here's to the crazy ones.  
The misfits.  
The rebels.  
The troublemakers.  
The round pegs in the square holes.  
The ones who see things differently.  
They're not fond of rules.  
And they have no respect for the status quo.  
You can praise them, disagree with them, quote them,  
disbelieve them, glorify or vilify them.  
About the only thing you can't do is ignore them.  
Because they change things.  
They invent. They imagine. They heal.  
They explore. They create. They inspire.  
They push the human race forward.  
Maybe they have to be crazy.  
How else can you stare at an empty canvas and see a work of art? Or sit in silence and  
hear a song that's never been written? Or gaze at a red planet and see a laboratory on  
wheels?  
We make tools for these kinds of people.  
While some see them as the crazy ones, We see genius.  
Because the people who are crazy enough to think they can change the world, are the  
ones who do.*

– Apple, *Think different*

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## Appendix X: How to Get a Date

*Were you born in 2000? If so, in which millennium were you born?*

Phrases such as “in the fifth century B.C.” leave many people confused. The following notes should help you get a handle on dating notation and terminology.

1. BC, BCE, CE & AD
  - B.C. = B.C.E. = “Before Christ” = “Before Common Era”; used for dates before 1 A.D.
  - A.D. = C.E. = “anno Domini” (“in the year of our Lord”) = “Common Era”; refer to dates after 1 B.C.
2. In general usage and by historical convention, there is no zero year – that is, no 0 B.C. nor 0 A.D. That is, the year before 1 A.D. was 1 B.C.
3. The first and last years of each century:
  - 1 B.C. was the last year of the first century B.C.
  - 1 A.D. was the first year of the first century A.D.
4. Since a century lasts 100 years...
  - The first century A.D. lasted from 1–100 A.D. (inclusive).
  - The first century B.C. lasted from 100–1 B.C. (inclusive).

Given the above, you can derive a table like the following:

100–001 B.C. = first century B.C.	001–100 A.D. = first century A.D.
200–101 B.C. = second century B.C.	101–200 A.D. = second century A.D.
300–201 B.C. = third century B.C.	201–300 A.D. = third century A.D.
400–301 B.C. = fourth century B.C.	301–400 A.D. = fourth century A.D.
500–401 B.C. = fifth century B.C.	401–500 A.D. = fifth century A.D.
600–501 B.C. = sixth century B.C.	501–600 A.D. = sixth century A.D.
	2020 = the 21st century, etc.

Take a few moments to think through this table. You'll see how it follows from the points given above. It won't take you long to become familiar with its patterns.

5. The same reasoning used for centuries (above) also applies for millennia. If 1000 years = 1 millennium (plural = “millennia”), then:

1000–0001 B.C. = 1st millennium B.C.	0001–1000 A.D. = 1st millennium A.D.
2000–1001 B.C. = 2nd millennium B.C.	1001–2000 A.D. = 2nd millennium A.D.

6. It is best to **use both types of notation together** to avoid confusion. That is, when someone says: “in the middle of the second century B.C.”; mentally repeat to yourself: “around 150 B.C., in the second century.”
7. Just when you think you have it all figured out.... **Astronomers** use a different and more rational convention, inserting a **zero year**. That is, the historian’s 1 B.C. becomes the astronomer’s 0 year. Therefore, x B.C. for the historian = (x–1) B.C. for the astronomer. In this course, we’ll use the historian’s reckoning, but beware of this possible discrepancy if you find resources about ancient astronomy prepared by astronomers.

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*“The intelligent minority of this world will mark 1 January 2001 as the real beginning of the 21 century and the Third Millennium.... Those who celebrated the twin events a year too soon are also invited to join in the celebrations.... Though some people have great difficulty in grasping this... we’ll have had only 99 years of this century by January 1 2000.”*

*— Sir Arthur C. Clarke, author of 2001: A Space Odyssey,  
in a 2000 interview.*

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*Is 2020 the first year of a new decade?*

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## Appendix Y: General Timelines

You will encounter a lot of names of periods, people and places in this course. Take comfort: for this course you do not need to memorize dates, nor look up every place name in an atlas, nor read up on biographies of all the people who were so dear to Torrance and Lewis. Think of the personal names as if you're merely being introduced at a party; there are no burdens of future expectation, but you never know if one or two might turn out to become genuine friends. Think of place names as exotic locales which some future travel agent may book for you. Terms on timelines are just introductions, like hearing that so-and-so whom we've just met is a friend of whom, or lives in this part of town, or goes to that church or school.

With respect to timelines, far more important than actual dates is getting a sense of relative sequence, such as Socrates taught Plato who taught Aristotle who taught Alexander the Great... not vice-versa. However, to develop a general perspective of the temporal sequencing of events, it is very handy to familiarize yourself with several well-chosen landmark dates or ranges of dates. A few such dates on a timeline can serve as a helpful frame of reference and anchor the relative sequences at some point.

Because both Torrance and Lewis covered the whole range of the history of theology and science from antiquity through the 20th century, in the following pages are separate timelines for Antiquity, the Middle Ages, Early Modern and Modern periods. In each case, the timeline has been confined to a single page. Approximate dates are represented by *circa* or *ca.*, which means "around." Links for non-biblical figures (to Wikipedia or my own web pages) make the Timelines a quick jumping off point for convenient reference. Keep these timelines handy, refer to them as you wish, and take heart that nothing needs to be memorized.

To be useful at a glance, timelines by nature are extremely selective.

- What names and events have I left out that you would put in?
- Or that I've included but you would leave out?

---

*"We are puny dwarfs standing on the shoulders of giants."  
— Bernard of Chartres, 12th century*

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## ANCIENT TIMELINE

“Ancient” – before 529 A.D.		
Highlights	Description	Date
3rd millennium BC	<u>Egyptian Pyramids</u> Mesopotamian city-states	3000-2000
2nd millennium BC	Abraham, Moses, Exodus, David (ca 1000) <u>Babylonian astronomy: Venus tablets</u>	2000-1000
<b>Hellenic</b> (“Early Greek”): Presocratics through Aristotle	6th & 5th centuries: <u>Presocratic philosophers</u> Ezekiel, Confucius, <u>Thales</u> , <u>Pythagoras</u> , <u>Parmenides</u>	600-401
	4th century BC: <u>Buddha</u> , <u>Kidinnu</u> , <u>Socrates</u> , <u>Plato</u> , <u>Aristotle</u> , Alexander	400-301
<b>Hellenistic</b> (“Later Greek”): Greek civilization after Alexander	death of <u>Alexander the Great</u>	323
	death of <u>Aristotle</u>	322
	<u>Euclid</u> , fl. 300 BC <u>Archimedes</u> , d. 212 BC <u>Hipparchos</u> , 150 BC	
	<u>Roman science: Cicero</u> , <u>Lucretius</u> , <u>Ovid</u> , <u>Seneca the Younger</u> , <u>Pliny the Elder</u>	100 BC - 100 AD
<b>Roman</b> (“Late Antiquity”)	Jesus of Nazareth Paul the Apostle <u>Ignatius of Antioch</u>	
	<u>Galen</u> and <u>Ptolemy</u>	150 AD
	<u>Athanasius</u> , 4th cent. <u>Council of Nicaea</u> , 325 <u>Basil the Great</u> , 4th cent. <u>Augustine</u> , ca. 400 <u>Cyril of Alexandria</u> , ca. 400 <u>Boethius</u> , <i>Consolation of Philosophy</i> , ca 500	
	<u>Justinian</u> closed the Academy at Athens <u>John Philoponus</u> , ca. 490-570	529 AD*

\* The sixth century A.D. may be taken as the end of antiquity and the beginning of the Middle Ages. The year 529 A.D. is chosen arbitrarily, but it does have symbolic value representing both the end of ancient learning (Justinian closed the Academy at Athens) and the beginning of medieval culture (Benedict founded his monastery at Monte Casino in Italy).

## MEDIEVAL TIMELINE

“Middle Ages” or “Medieval” – 529 to ca. 1400 A.D.		
Highlights	Description	Date
Early Middle Ages	<u>Benedict</u> founded monastery at Monte Cassino, Italy	529 AD*
	<u>Abbasid caliphate</u> , Baghdad, 750–1258; <u>Al-Ghazali</u>	
	<u>Umayyad caliphate</u> , Cordoba, Spain, 756–1031; <u>Ibn Rushd</u>	
	<u>Fatimid caliphate</u> , Cairo, Egypt, 909–1072	
	<u>Islamic science</u>	
	Celtic scholarship ( <u>Book of Kells</u> ca. 800)	700s
	<u>Carolingian renaissance</u>	800s
	<u>Early medieval science</u>	
	<u>Anselm of Canterbury</u>	1000's
<u>12th century Renaissance</u>	Founding of cathedral schools, and Universities of Bologna, Paris, Oxford	1100s
	<u>Bernardus Silvestris</u>	
High Middle Ages (13th-14th centuries)	<u>Albertus Magnus</u>	1200s
	<u>Thomas Aquinas</u> , <i>Summa theologiae</i>	
	<u>Robert Grosseteste</u> , <i>Hexaemeron</i>	
	<u>Duns Scotus</u>	
	<u>Dante Alighieri</u> , <i>Divine Comedy</i>	1300s
	<u>Chaucer</u> , <i>Canterbury Tales</i>	
	14th-century science: <u>Nasir al-Din al-Tusi</u> (astronomer), <u>Jean Buridan</u> , <u>William Ockham</u> , <u>Nicole Oresme</u>	
	<u>Ming dynasty</u> (early Chinese science)	1368-

\* The sixth century A.D. may be taken as the end of antiquity and the beginning of the Middle Ages. The year 529 A.D. is chosen arbitrarily, but it does have symbolic value representing both the end of ancient learning (Justinian closed the Academy at Athens) and the beginning of medieval culture (Benedict founded his monastery at Monte Casino in Italy).

## EARLY MODERN TIMELINE

Highlights	Description	Date
15th century “Quattrocento” 1400s <b>Renaissance</b>	<u>Jan van Eyck</u> , <u>Masaccio</u> , <u>Brunelleschi</u> , <u>Raphael</u> , <u>Michelangelo</u> , <u>Leonardo</u>	1400s
	Fall of Constantinople, Byzantine capital, to Turks (westward influx of Greeks)	1453
	<u>Gutenberg printed Bible</u> with movable type	1454
16th century <b>Reformation</b>	<u>Martin Luther</u> , 95 theses	1517
	<u>Jean Calvin</u> , <i>Institutes</i>	1536
	<u>Copernicus</u> , <i>On the Revolutions</i> <u>Vesalius</u> , <i>On the Fabric of the Human Body</i>	1543
17th century <b>Scientific Revolution</b>	<u>Francis Bacon</u> , <i>Advancement of Learning</i>	1605
	<u>Johann Kepler</u> , <i>Harmony of the Universe</i>	1618
	<u>William Harvey</u> , <i>Circulation of the Blood</i>	1628
	<u>Galileo’s trial</u>	1632
	<u>René Descartes</u> , <i>Principles of Philosophy</i>	1644
	<u>Rembrandt</u>	
	<u>Qing dynasty</u>	1636-
	Death of Galileo, birth of Newton	1642*
	<u>Royal Society of London</u> , founded	1660
	<u>Nicolaus Steno</u> , <i>Prodromus</i>	1669
	<u>Robert Boyle</u> , <i>The Vulgarly Received Notion of Nature</i>	1686
	<u>Isaac Newton</u> , <i>Mathematical Principles of Natural Philosophy</i>	1687

\* Since the lives of Galileo and Newton together span what is often called the “Scientific Revolution,” 1642 is a convenient symbol, though strictly speaking a problematic date. At that time England and continental Europe used different calendars, ten days out of phase. On the continent—where Galileo died on 9 January 1642—Newton’s birth would have been reckoned as 4 January 1643, though by England’s calendar he was born on Christmas day, 1642. Thus the oft-cited symbolic date holds only by the conflation of two unsynchronized calendars!

## MODERN TIMELINE

Highlights	Description	Date
18th century Enlightenment	<u>J. S. Bach</u> , <u>George Friedrich Handel</u>	1700s
	• Origin of modern scientific disciplines. • Industrial revolution.	
	<u>David Hume</u> , <i>Treatise on Human Nature</i> , 1738	
	<u>Buffon</u> , <i>Natural History</i> , 1749-	
	D'Alembert, Diderot, <i>Encyclopédie</i> , 1751-	
	<u>Lisbon earthquake</u> , 1755 <u>Voltaire</u> , <i>Candide</i> , 1758	
	<u>Immanuel Kant</u> , <i>Critique of Pure Reason</i> , 1781	
19th century	• Historicization of the Earth, the cosmos, life on Earth, languages, even Biblical texts. • Professionalization of scientific disciplines.	1800s
	<u>George MacDonald</u>	
	<u>Charles Darwin</u> , <i>Origin of Species</i> , 1859	
	<u>Ernst Mach</u> , phenomenalist dualism	
	<u>James Clerk Maxwell</u> , Electrodynamical field <u>Max Planck</u>	
20th century	<u>Albert Einstein</u> , 1905 “miracle year” <u>H. G. Wells</u> , <u>G. K. Chesterton</u> <u>Alfred North Whitehead</u> and <u>Bertrand Russell</u> , <i>Principles of Mathematics</i> , 1910-1913 <u>World War I</u> , 1914-1918 <u>Henri Bergson</u> <u>Kurt Gödel</u> , incompleteness theorems, 1931 <u>J. B. S. Haldane</u> <u>Karl Barth</u> , <i>Church Dogmatics</i> (1932-1967) <u>World War 2</u> , 1939-1945 • Big science, big technology. <u>Michael Polanyi</u> <i>Personal Knowledge</i> , 1958 <u>J. R. R. Tolkien</u> , 1892-1973 <u>C. S. Lewis</u> , 1898-1963 <u>T. F. Torrance</u> , 1913-2007	1900s



## Wonderful World — by Sam Cooke

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*Don't know nothin' 'bout history  
Don't know much biology  
Don't know nothin' 'bout no science book  
Don't know nothin' 'bout the French I took  
But I do know that I love you  
And I know that if you love me, too  
What a wonderful world this would be*

*...Don't know much about the middle ages  
Looked at the pictures and I turned the pages  
Don't know nothing 'bout no rise and fall  
Don't know much about nothing at all*

*Girl it's you that I've been thinking of  
And I know if I could win your love  
What a wonderful world this would be  
What a wonderful, wonderful, wonderful, wonderful world  
What a wonderful, wonderful, wonderful, wonderful world  
But I do know that I love you  
And I know that if you loved me too  
What a wonderful world this would be*

---

Performed by Art Garfunkel, Paul Simon and James Taylor  
at [youTube](#), [Apple Music](#)

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## Appendix Z: Word Counts and Spell Checking

Most word processors provide convenient word counts and spell-checking (if you write offline so as not to lose work if the connection is lost or the power goes off). The forums at the course website display word counts if you dare to compose online. If you prefer, [Wordcounter.net](http://Wordcounter.net) is a free web page that will perform a word count and/or a spell-check of pasted text.

### Word counts

Copy the following paragraph (including parenthetical words) and paste it into the word count field at [wordcounter.net](http://wordcounter.net).

Reflections for this course require a minimum of 300 words.

*In comparison, how many words does this paragraph contain?*

Without the Greeks we wouldn't have history. The Greeks invented three kinds of columns—Corinthian, Doric, and Ionic. They also had myths. A myth is a female moth. One myth says that the mother of Achilles dipped him in the River Styx until he became intolerable. Achilles appears in the Iliad, by Homer. Homer also wrote The Odyssey, in which Penelope was the last hardship that Ulysses endured on his journey. Actually, Homer was not written by Homer but by another man of that name. Socrates was a famous Greek teacher who went around giving people advice. They killed him. In the Olympic Games, Greeks ran races, jumped, hurled the biscuits, and threw the javelin. The reward to the victor was a laurel wreath. The government of Athens was democratic because people took the law into their own hands. There were no wars in Greece, as the mountains were so high that they couldn't climb over to see what their neighbors were doing.... ([more](#))

### Spell checking

Poor spelling makes you look less smart than you are! More often than not it is a sign of carelessness and hasty composition. Please spell-check all of your forum reflections and your final paper. You may want to print them out first, as it's often hard to proofread on screen. Although there are some problems with spell checkers, when used with care they can be very helpful – yet enjoy the following poem, submitted by an anonymous reader, from *Readers Digest*, May 2004, p. 181:

*Problems with your Spell Checker?*

Eye have a spelling checker. It came with my pea sea.  
It plainly marries four my revue miss steaks eye kin knot sea.

Eye strike a key and type a word and weight four it two say  
Weather eye am wrong oar write. It shows me strait a weigh.

As soon as a mist ache is maid, it nose bee fore to long  
And eye can put the error rite. Its rarely ever wrong.

Eye have run this poem threw it, I am shore your pleased two no.  
Its letter perfect in it's weigh. My chequer tolled me sew.

As Wolfgang Pauli wrote,

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*"It's not even wrong."*

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## About the Instructor

Greetings!

That's my wife, Candace, with me on Trail Ridge Road in Rocky Mountain National Park, Colorado. We've always enjoyed traveling in the American west. We have three grown daughters and live in Norman, Oklahoma.



If you're taking this GCS course on science and religion, you might be interested to know that I'm a historian of science by training. I've been on the faculty at the University of Oklahoma since 2000. I'm a member of the Department of the History of Science, and I am curator of a research collection of rare books in the history of science.

Back in the day, I was pondering which area of science I might pursue for graduate school. As a result of reading the apologetics of Francis Schaeffer, I came across a book by Herbert Schlossberg who began his first chapter with the dramatic pronouncement: "All idols belong either to nature or to history."<sup>3</sup> Pondering that claim, it seemed to me to suggest that scholarship in the history of science might provide a constructive voice for the pre-evangelism of intellectual culture. Believe it or not, my avid reading of C. S. Lewis and J. R. R. Tolkien also helped kindle my desire for graduate study in the history of science. Later, while immersed in those studies, a brief conversation with Thomas F. Torrance profoundly deepened my understanding of the history of science. Later still, through continued study of the history of science, I found my way (God patiently drawing me) to Trinitarian theology. Then it was Trinitarian theology that brought Candace and me to GCI, while in turn, GCI had been similarly shaped by the wisdom of both Lewis and Torrance.

What is the history of science? It's a branch of intellectual and, more broadly, cultural history, that includes the history of the relations between science and religion. It's easier to show than to tell: if you watch this short [Video intro](#), a teaser for a History of Science course I sometimes teach at OU, I think it might give you a good idea of what history of science is like and, maybe, something of how I enjoy teaching using rare books. ([More about that course](#), which is an introductory survey of the history of science up through Newton.) Of course, TH504 is a course in science and religion, not history of science, although it draws upon the history of science given that so many of

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<sup>3</sup> Herbert Schlossberg, *Idols for Destruction* (Nelson, 1983), p. 11.

the modern caricatures of an alleged essential “conflict between science and religion” have a historical dimension.

Oh yes, almost forgot: as an expression of our interest in digital scholarship and Trinitarian theology, fellow historian of science Brent Purkape and I serve as the webmasters and bibliographers for the T. F. Torrance Theological Fellowship. Neither of us are theologians, but history of science overlaps with history of theology more profoundly than many people suppose.

You can find out more about me by exploring the links below, and from the biographical blurb that follows.

Links:

- My personal blog: [kerrysloft.com](http://kerrysloft.com) (with an [About](#) page).
- My website for educational outreach (with Brent Purkape): [lynx-open-ed.org](http://lynx-open-ed.org). This website features the [Galileo's World](#) exhibition and open educational resources (“OER’s”) we developed to support it.
- Another digital project with Brent Purkape: [skytonight.org](http://skytonight.org).
- Professional web page at the OU History of Science Department.
- Candace and I participate in [GC Surrey Hills](#) (GCI), Oklahoma City.

Here’s a biographical blurb written about me a few years ago by Robin Roads, speaker coordinator for the Oklahoma City Astronomy Club:

Kerry V. Magruder earned undergraduate and graduate degrees from Truman State University in Missouri and a doctorate in history of science from the University of Oklahoma. His background includes teaching high school chemistry and biology, directing a university planetarium, and teaching university astronomy, biology, geology, science education and history of science. Since 2000, Dr. Magruder has served in the History of Science Collections, University of Oklahoma Libraries. In 2009 he became Curator and in 2011 received the John H. and Drusa B. Cable Chair.

As a young kid, Kerry marveled at the sight of the Milky Way, which could be seen almost every night in the dark northeastern Missouri skies. He remembers just looking up at the myriad of stars, and sometimes feeling lost in the wonder of it all. He never really thought of himself as an astronomer; the night sky was always a natural part of him, just as natural history was a part of his daytime hours. Years later, when Kerry taught high school science, he started a student Astronomy Club where they emphasized learning the night sky as part of the common heritage of humanity. When Kerry began his pursuit of a professional career in the history of science, it provided him an opportunity to explore the marvelous tales of astronomy in ancient and modern cultures. While completing a doctorate in the history of science, he served as Planetarium Director at a small liberal arts college. He said that when they assembled the mechanical-optical star projector, he realized that the engineers who designed it

were like modern day ancient astronomers, as the gears had the circular devices etched on them of the Tychonic system of mathematical astronomy. Look at any star projector and it is a monument to ancient astronomy.

As current Curator of the OU History of Science Collections, Kerry works with old astronomy books, meeting Copernicus, Galileo and Newton almost daily in the vault of the collections, and enjoys giving presentations to universities and astronomy clubs. In his spare time, he enjoys stargazing, through the use of amateur telescopes and naked eye observations. He and his family go to local star parties around Norman, and sometimes attend our club's annual fall star party, "Okie-Tex," held near Black Mesa out in the Oklahoma panhandle.

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*"that i exist is a perpetual surprise"*  
(a button I often wore on my shirt in junior high)

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## **TH504 • Trinitarian Perspectives on Faith and Science**

### **Weekly Schedules**

*Dear Father, Son and Spirit, teach us today to see Creation with the mind of Christ. Help us to develop a theological instinct to apprehend Christ as the reality sustaining the Creation. Lead us to discern Christ, through the Spirit, as actively present in, and working behind, all things in heaven and earth, toward the eventual full expression of your almighty love. Give us the binoculars of Trinitarian perspectives to help us see further into the wonder of your Creation, through Jesus Christ our Lord. Amen.*



## Semester Overview

At a glance			
WEEK	Spring 2021		
ORIENTATION			
0	Jan 2	Registration begins. Week 1 Orientation assignments open. Orientation assignments include reading the course packet, and may be started before the semester officially begins.	
1	Jan 14	Orientation #1: <u>Thomas A. Noble, “T. F. Torrance on the Centenary of His Birth”</u> (audio, 60 mins.)	Orientation #2: <u>Max McLean, “C. S. Lewis on Stage: The Most Reluctant Convert”</u> (DVD or streaming from Amazon Prime, 77 mins.)
REGULAR WEEKLY SEMINARS			
WEEK		PERSPECTIVE	APPLICATION
2	Jan 20	Thinking Theologically	Flat Earth Myth
3	Jan 27	Language and Reality	The Galileo Affair
4	Feb 3	Knowing Kata-physin	Interdisciplinary Relations
5	Feb 10	Being and Relation	Relational Physics (& Gen 1)
6	Feb 17	Contingent Order	Geohistory
7	Feb 24	Imagining God and Nature	<i>Out of the Silent Planet</i>
8	March 2	Stratified Reality	Reality in Many Dimensions
9	March 9	Dualism	Dilemmas of Design
10	March 16	Natural Theology	Evolution
11	March 23	The Priest of Creation	The New Creation
COURSE COMPLETION			
12	March 30	All regular assignments for weeks 1-10 and extra-credit book essays are due by Monday, April 7, 2020, 11 pm.	
13	Apr 7	Week 12 is devoted to final revisions of your semester-ongoing paper on “Love and the Cosmos.” Due 11 pm Wednesday, April 9, 2020.	

Detailed information appears on following pages. See [Appendix H](#) for a combined outline of all Perspective and Application presentations. A similar table, with links to all videos, appears on the landing page for this course at my blog: [kerrysloft.com/education/trinitarian-perspectives-on-faith-and-science/](http://kerrysloft.com/education/trinitarian-perspectives-on-faith-and-science/)

## Week 1: Orientation

### UNDER REVISION...

In Week 1 you will find an Orientation Quiz that covers your orientation assignments in the first week, worth 25 points. Allow 15 hours for this assignment. Why not get started on the Orientation Assignment before class even officially begins? It will be made available shortly after registration opens on Jan 2, 2020. If you get a head start on the Orientation, then you can work a week ahead all through the semester.

Checklist	Hrs	Points
Open: Jan 6. • Due: end of Week 2, Jan 18		
<input type="checkbox"/> Optional: Update your GCS website profile		
<input type="checkbox"/> 1. Write an Autobiographical Sketch and post it in the Orientation Forum.	1 hrs	3 pts
<input type="checkbox"/> 2. Meditate on the course scripture: Colossians 1:15–20	0.3 hrs	1 pts
<input type="checkbox"/> 3. Watch the Orientation #1 external presentation, an introduction to Thomas F. Torrance. 1 hr. <input type="checkbox"/> Forum. 1 hr.	2 hrs	4 pts
<input type="checkbox"/> 4. Watch the Orientation #2 external presentation, an introduction to C. S Lewis. 77 mins. <input type="checkbox"/> Forum. 1 hr.	2.4 hrs	4 pts
<input type="checkbox"/> 5. Read the Course Packet and commit to observe the Honor Code for this course.	7 hrs	5 pts
<input type="checkbox"/> 6. Post your anticipated schedule in the Orientation forum.	0.5 hrs	2 pts
<input type="checkbox"/> 7. Write your “Love and the Cosmos” reflection and post it in the “Week 1 Love and the Cosmos” forum.	1 hrs	4 pts
<input type="checkbox"/> 8. Watch the Course Introduction section of the Perspective lecture for Week 2. (45 minutes. Discuss in the Week 2 forums next week.)	0.75 hrs	2 pts
	14.95 hrs	25 pts

To complete the Orientation Assignment, do the following:

Optional: Update your GCS website profile.

1. Orientation Forum: Write an Autobiographical Sketch (300 words minimum; 1 hr).

The purpose of this Sketch is to introduce yourself to the other members of the class and to the instructor.

- Part 1: Begin with your background, including church background, educational background (including any seminary courses taken previously), and present ministry and/or vocational situation.
- Part 2: Then write a paragraph describing why you are interested in this class. Why did you sign up for it? What do you hope to get out of it? Other than grades, what is the worst that could happen? What is the best-case scenario?
- Logistics: After you have written the Sketch and checked the word count (see [Appendix Z](#)), post it in the Week 1 Orientation Forum. In the title of the post, include the form of your name that you actually go by so that others in the class will know how to address you (e.g., “Penny” rather than “Penelope,” “Harry” rather than “Gou Xuehong,” or “Jack” instead of “Clive Staples,” etc.).

2. Meditate on this passage from Paul’s letter to the Colossians (20 mins.):

“The Son is the image of the invisible God, the firstborn over all creation. For in him **all things** were created: things **in heaven** and **on earth**, **visible** and **invisible**, whether thrones or powers or rulers or authorities; **all things** have been created through him and for him. He is before **all things**, and in him **all things** hold together. And he is the head of the body, the church; he is the beginning and the firstborn from among the dead, so that in everything he might have the supremacy. For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself **all things**, whether things **on earth** or things **in heaven**, by making peace through his blood, shed on the cross.” (Colossians 1:15–20)

*Make it your prayer this semester to plumb the mystery disclosed here more deeply, with ever greater meaning and understanding.*

Make a note to read, in a contemplative mode, sometime during the semester, passages of scripture that refer to the creation, such as: Job 38-41; Psalms 8, 19, 33, 96-98, 104, 147, 148; Proverbs 8:22-36; Isaiah 11:6-9, 65:17-25; Deuteronomy 29:22-28; Hosea 2:20-23, 4:1-6; 1 Corinthians 8:6; Colossians 1:15-20; Hebrews 1:1-4; Revelation 1:17, 21:5-6. ([BibleGateway.com](http://BibleGateway.com))

3. Watch the Orientation #1 external presentation, an introduction to Thomas F. Torrance (2 hrs):

- Thomas A. Noble, “T. F. Torrance on the Centenary of His Birth: A Personal Reminiscence and Assessment,” Keynote presentation, Thomas F. Torrance Theological Fellowship, Annual Meeting 2013. Audio, 60 mins. <https://tftorrance.org/2013-tan-2>. (2 points)
- On the Week 1 Introduction to Torrance Forum, post a response to the Orientation #1 external presentation. Your post should contain at least 300 words. 1 hr. (3 points)
- Note: Listen to this talk for the gist of who Torrance was, without worrying about mastering the details. In your post, respond to what strikes you most about Torrance as a result of listening to the talk. What stands out? Does anything

connect with what you already know or have heard of Torrance? Does anything whet your appetite to become better acquainted with Torrance's writings? If you will, think of this exercise as a pre- and post- "self-test": At the end of the semester, you might wish to come back to this presentation and listen to it a second time, and compare your understanding at that point with the response that you record here.

4. Watch the Orientation #2 external presentation, an introduction to C. S Lewis (2 hrs, 17 mins).
  - Max McLean, "C.S. Lewis On Stage – The Most Reluctant Convert." Vision Video, 2019. NTSC, all regions. ASIN#: B0788WSV81. 77 minutes. [Amazon US](#). The DVD is about \$14 at online vendors. Also available on many streaming services; e.g., available free in the US with Amazon Prime. (2 points)
  - On the Week 1 Introduction to Lewis Forum, post a response to the Orientation #2 external presentation. Your post should contain at least 300 words. 1 hr. (3 points)
  - Note: Watch this dramatic presentation for the gist of who Lewis was, without worrying about mastering the details. In your post, respond to what strikes you most about Lewis as a result. What stands out? Does anything connect with what you already know or have heard of Lewis? Does anything whet your appetite to become better acquainted with Lewis' writings? If you will, think of this exercise as a pre- and post- "self-test": At the end of the semester, you might wish to come back to this dramatic presentation and watch it a second time, and compare your understanding at that point with the response that you record here.
5. Read the Course Packet (7 hrs):
  - (1) Read the main section of the *Syllabus*.
  - (2) Then read through each of the *Appendices*, in order, to get an overall view of the course.
  - (3) Read the *Weekly Schedules* pages for this Orientation Week and for Week 2.

The Appendices contain detailed instructions for each assignment that will make more sense when you are ready to complete that kind of assignment for the first time. So long as you know that they are there, you can refer to them at the appropriate time. For example, before doing the Week 2 Perspective Assignment, read the general explanation of it in Appendix N, "Weekly Assignments – Overview," and then turn to the step-by-step instructions in Appendix O, "The Weekly Perspective Assignment"; and so forth. The hours allocated for reading the Course Packet refers to the time you will need to consult these appendices as you work through the assignments the first week. Read ahead so that the work will go more smoothly. After the first week or two, you'll find a rhythm, and assignments will flow naturally.

You may want to print out the Course Packet and put it in a notebook for easy reference.

Study the Honor Code for this course in [Appendix J](#). It refers to the Course Etiquette and Academic Freedom appendices, so examine those closely as well. Contact me if you have questions or if any part of it is unclear.

6. Week 1 Orientation Forum: Post your weekly schedule (30 mins):

Study the “Schedules A and B and C... Got rhythm?” section of [Appendix N](#), “Weekly Assignments Overview,” and the “Time Management” section of [Appendix E](#), “Study Tips.” Think through various possible scenarios and settle upon the weekly rhythm that makes sense to you. Post your anticipated weekly schedule in the Orientation Forum by replying to your previous post.

7. Week 1 Love and the Cosmos Forum (1 hr):

The cover page of the course packet offers an unofficial title for the course: “Love and the Cosmos: Trinitarian Perspectives on Science with T. F. Torrance and C. S. Lewis.”

Did you think it strange to hear the words “love” and the “cosmos” in the same sentence? How might they go together? Why might they not? What questions come to your mind that you might consider further during this course? Post initial reflections on the phrase “love and the cosmos” in the Week 1 Love and the Cosmos Forum.

*Tip: Use this “Love and the Cosmos” post as an aid to deepen your reflections by revising it at various times throughout the semester.*

8. Week 2 Presentation lecture: Thinking Theologically (45 mins):

Begin watching the Presentation lecture for Week 2 to conclude the Week 1 Orientation activities. The first section is a “Course Introduction” that lasts 45 minutes. Ordinarily, plan to spend 2 hours watching/reading the Perspective presentation each week. But the Week 2 Presentation lecture, “Thinking Theologically,” is longer than usual – 2 hours of run time including the 45-minute introduction to the course. Plan to allocate 3 hours for it and to begin watching it during the Orientation week. Always plan for longer than the actual run time, since you will want to take breaks to stretch your legs, let your mind process the material. In general, plan not to watch any lecture this semester in one sitting.

Now you are ready to take the Orientation quiz!

The questions on the Orientation quiz are as follows:

1. *True or False? I have posted an Autobiographical Sketch of at least 300 words, with my name in the title, in the Orientation Forum. (3 points)*

2. *Meditate on the course scripture: Colossians 1:15–20 (1 point)*
3. *I have watched the Orientation #1 external presentation, an introduction to Thomas F. Torrance. (2 points)*
4. *In the Week 1 Introduction to Torrance Forum, I have posted a response to the Orientation #1 external presentation, an introduction to Thomas F. Torrance. My post contains at least 300 words. (2 points)*
5. *I have watched the Orientation #2 external presentation, an introduction to C. S. Lewis. (2 points)*
6. *In the Week 1 Introduction to Lewis Forum, I have posted a response to the Orientation #2 external presentation, an introduction to C. S. Lewis. My post contains at least 300 words. (2 points)*
7. *True or False? I have read the Syllabus. (1 point)*
8. *True or False? I have read all the Appendices. (2 points)*
9. *True or False? I understand and will adhere to the Honor Code for this course, and uphold Course Etiquette and Academic Freedom. (2 points)*
10. *True or False? I have decided upon a schedule for the regular weekly assignments that I think will work for me, and I have committed to establish a weekly rhythm for the course. I have posted that schedule as a reply to my Autobiographical Sketch in the Orientation Forum. (2 points)*
11. *True or False? I have posted an initial reflection on the theme “Love and the Cosmos” in the Week 1 Love and the Cosmos Forum. (4 points)*
12. *True or False? I have watched the first section, “Course Introduction,” of the Week 2 Presentation lecture “Thinking Theologically.” (2 points)*

When you take that quiz, congratulations! You have completed your first “Gradebook Declaration.” All Gradebook Declarations in this course are quizzes of this sort.

You can *retake any Gradebook Declaration as often as you like before Saturday at 11 pm of the following week* of class. For example, if you only read the Syllabus, you can answer Question 7 and skip the others. Then you can come back to the other questions after you complete the tasks to which they refer.

Read more about Gradebook Declarations in [Appendix I](#).

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*“There are three rules for writing the novel. Unfortunately, no one knows what they are.”*  
—Somerset Maugham

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## Week 2: Thinking Theologically

*Complete the Orientation Assignment before proceeding; see Week 1.*

Assignment	Checklist	Description
Jan 6	This week’s assignments open	
<b>Perspective</b> Monday-Tues Jan 13-14 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Thinking Theologically</b> <ul style="list-style-type: none"><li>• “Reconciliation of Mind,” in <i>Atonement</i>, 437-447.</li><li>• (“Lost in the Cosmos,” Walker Percy.)</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Flat Earth Myth</b>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update “Love in the Cosmos” with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	“The Least of These” – dung beetles
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Jan 25, 2020	Last date to complete this week’s regular assignments.	

*Note: Begin watching the Presentation video for Week 2 during the Orientation activities of Week 1. Ordinarily, plan to spend 2 hours watching the Perspective video each week. But the Week 2 Presentation video, "Thinking Theologically," includes a 45-minute introduction to the course. Plan to allocate 3 hours for it over Weeks 1-2; perhaps 1 hour in Week 1, and 2 hours in week 2. It actually lasts about 2 hours run time, but you will want to take breaks to stretch your legs, let your mind process the material. In general, plan not to watch any lecture this semester in one sitting.*



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## WEEK 2 PERSPECTIVE: THINKING THEOLOGICALLY



"Winter Owl" by Michael Barfield  
Rivendell Gallery

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*"Praise the Lord! How good it is to sing praises to our God, how pleasant and fitting to praise him! He determines the number of the stars and calls them each by name. Great is our Lord and mighty in power; his understanding has no limit. He covers the sky with clouds; he supplies the earth with rain and makes grass grow on the hills. He provides food for the cattle and for the young ravens when they call." – Psalm 147*

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**Topics:** Introduction to the course; thinking theologically, approaching science with a Trinitarian theological instinct; why Torrance and Lewis; definitions of "science," "nature," etc.; general timelines; the hypostatic union a new basis for God and nature; reconciliation of the mind and cultural evangelism. By thinking theologically, we will stir ourselves to love and praise God for his creation with all our hearts and with all our minds.

*Complete the Orientation Assignment before proceeding; see Week 1.*

**Outline:**

1. Course Introduction
  - What kind of course is this? • Stratification of Truth • Course outline • Why study the past? • Love and the Cosmos
2. Models of God and Nature
3. Science and Religion
4. Why Focus on T. F. Torrance and C. S. Lewis?
5. Christian Theological Instinct
6. Conclusion

**Objectives:**

After watching/reading this presentation, you will be able to...

1. Describe what the course is about, its purpose and aim.
2. Diagram the following models of God and Nature: pagan, atheist, pantheist, deist, theist and Trinitarian.
3. Articulate basic distinctions between the fields of natural science, theology, technology, magic, medicine, mathematics, and philosophy.
4. Explain the benefits of reading T. F. Torrance and C. S. Lewis for this course.
5. Describe what is meant by “Christian Theological Instinct.”

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Perspective video presentation, “Thinking Theologically,” and/or download the PDF with slides and script.
  1. Video at Vimeo: <https://vimeo.com/382723391>
  2. Slides with script (PDF): [kerrymagruder.com/TH504/TH504-Week2a-ThinkingTheologically.pdf](http://kerrymagruder.com/TH504/TH504-Week2a-ThinkingTheologically.pdf)
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Week 2 Perspective Gradebook Declaration.

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## WEEK 2 READINGS: CHRISTIAN THEOLOGICAL INSTINCT

### **Purpose:**

The readings this week will reinforce some of the themes of the first presentation, and set the stage for the entire course.

Download the Seminar Notes for this week's readings, and refer to them while reading:  
<http://kerrymagruder.com/TH504/Wk2-SeminarNotes.pdf>

Conduct a close reading of the following *required* reading assignment:

1. Thomas F. Torrance, "The Reconciliation of Mind: A Theological Meditation upon the Teaching of St. Paul," in *Atonement: The Person and Work of Christ*, ed. Robert T. Walker (Milton Keynes: Paternoster; Downers Grove, Illinois: IVP Academic, 2009), 437-447; [#2009-TFT-1n](#).
  - This essay emphasizes the importance of renewing our minds (Romans 12:1-2) so that we will not be alienated in our reasoning but able to love God with our entire being, including heart and mind. This is to develop a Christian theological instinct.
  - Cf. an audio version is available at minimal cost: [#2002-TFT-4](#).

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*This week's Seminar Notes include cross-references to Torrance's discussion of the Hypostatic Union in Incarnation, pp. 181-186, 190-192, 206-209.*

Enjoy the following *optional* reading:

- Walker Percy, *Lost in the Cosmos* (Farrar Straus & Giroux, 1983), pp. 6-17. Percy, a renowned Christian novelist, began this book (a parody of "self-help" manuals) with provocative queries on love and the cosmos.

Now refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: "Even to the Least of These"*

- <https://kerrysloft.com/education/even-to-the-least-of-these/>

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## WEEK 2 APPLICATION: THE FLAT EARTH MYTH



“Point of Know Return” by Kansas (1977)

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*“The search for truth is long and laborious and easily set aside. And since the present is transformed day by day, minute by minute, second by second, into the past, while the future is unknown and unknowable, we are left on the dark sea without stars, without compass or astrolabe, more unsure of our position and our goal than any of Columbus’s sailors. The terror of meaninglessness, of falling off the edge of knowledge, is greater than the imagined fear of falling off the edge of the earth. And so we prefer to believe a familiar error than to search, unceasingly, the darkness.”*

– Jeffrey Burton Russell, *Inventing the Flat Earth*

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**Topics:** This week’s case study of the Flat Earth Myth illustrates how history can aid us in the task of repentant rethinking, particularly with respect to widespread cultural mythologies of an alleged essential conflict between science and religion.

### Objectives:

1. One of the most pervasive misconceptions underlying the “warfare thesis” — that is, that there is an essential conflict between science and religion — is the mistaken idea that the Church suppressed knowledge of the shape of the Earth in the Middle Ages. After this lesson, you will be able to refute this common misconception with a factual account.
2. To develop a Christian theological instinct with respect to science and religion requires repentant rethinking on many levels, including, most basically, the factual and historical. This week’s analysis of the Flat Earth Myth illustrates how history can aid us in the task of repentant rethinking, particularly with respect to widespread cultural mythologies which allege that there is an essential conflict

between science and religion. After this lesson, you will be able to explain how a better understanding of history can help us recognize and uproot some of our deeply held misconceptions about science and religion.

**Steps:** For the weekly Application Assignment, usually there will be one slideshow presentation, about an hour long, that has been prepared specifically for this course. Instead of that typical lecture presentation, however, during Weeks 1 and 2 we are using videos which I previously prepared for general audiences rather than specifically for this course. Today's lesson is comprised of two videos with a combined length of about 50 minutes.

1. *Teaser video:* Watch this two-minute commercial for Robitussin: <https://youtu.be/INOkV1FrRJK>. What does it assume about how people in the past believed the Earth was flat? Can you recall similar examples of people today believing that people in the past thought the Earth was flat?
2. *Main video:* Shape of the Earth video at Vimeo. Go to it from my blog, Kerry's Loft, which also has links to download the script and a colorized version of the "medieval" woodcut: <https://kerrysloft.com/education/shape-of-the-earth-ii/>  
Outline:
  1. Introduction
  2. How did they know the spherical shape of the Earth?
  3. Did it last?
  4. Nicole Oresme, 14th century
  5. What about Columbus?
  6. The True Flat Earth Myth
  7. How could we be so wrong?
3. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
  - Complete your reflection and post comments on the Application Forum.
  - Make your Application Gradebook Declaration.

*Related (optional):*

- There is an older version of the Shape of the Earth video at Vimeo (<https://kerrysloft.com/history-of-science/shape-of-the-earth/>, 47 mins). I wrote and produced it many years ago for the "Cosmologies and Cultures Project" of the OBU Planetarium which I directed back in the mid-90's. This version, sadly, has a very poor production quality, which may be made up for by its entertaining dialogue format. It's goofy and more than a bit cheesy, but the dialogue format makes the information buffet more easily digestible. From this link you may also download a PDF that contains the script. This video was a lot of fun to make. And if nothing else, forgive its limitations by remembering that it's older than most of the students who

take my OU course nowadays. 🤖

- My old 1990's-era website (widely shared and copied across the Internet) in which I announced that the 1888 Flammarion book was the original source of the Flat Earth woodcut: [kerrymagruder.com/flatEarth/index.html](http://kerrymagruder.com/flatEarth/index.html).

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## WEEK 2: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 2 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 2: WEBSITE TASK #1

This week, aim to complete Website Task #1.  
Refer to [Appendix T](#) for instructions.

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## WEEK 2: LAST WORDS

Refer to [Appendix R](#) for instructions.



## Week 3: Language and Reality

Assignment	Checklist	Description
Jan 13	This week's assignments open	
<b>Perspective</b> Monday-Tues Jan 20 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Language and Reality</b> <ul style="list-style-type: none"><li>• STR Intro, 1-26.</li><li>• (Lewis, "Language of Religion")</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>The Galileo Affair</b> <ul style="list-style-type: none"><li>• Biblical interpretation exercise – Galileo</li><li>• (The Galileo Affair exhibit)</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(Constellations: The Winter Hexagon)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Feb 1, 2020	Last date to complete this week's regular assignments.	



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## WEEK 3 PERSPECTIVE: LANGUAGE AND REALITY



"The Treachery of Images" by René Magritte (1928-29)  
Los Angeles County Museum of Art

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*"Describe the aroma of coffee. Why can't it be done? Do we lack the words? And for what are words lacking? But how do we get the idea that such a description must after all be possible? Have you ever felt the lack of such a description? Have you tried to describe the aroma of coffee and not succeeded?"*

– Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe, Oxford: Blackwell, 2001, §610.

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**Topics:** Scripture and science; interpretation; stratification of truth (Trinity); Whitehead/Russell vs. Gödel/Polanyi parallel to Carl Henry vs. TFT; Reality, intuition, compelling power of reality, a posteriori and personal knowledge; disclosure model; epistemological repentance.

### Outline:

1. Introduction
2. Incarnation and Trinity
3. Theology and the Sciences
4. Propositional Knowledge
5. Science and the Sciences
6. Conclusion

### Steps:

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Perspective video presentation, "Language and Reality," and/or download the PDF with slides and script.
  1. Video at Vimeo: <https://vimeo.com/383855508> (password: "hypostatic")

2. Slides with script (PDF): <http://kerrymagruder.com/TH504/TH504-Week3a-Language-and-Reality.pdf>
3. Complete your reflection and post comments on the Week 3 Perspective Forum.
4. Make your Week 3 Perspective Gradebook Declaration.

The following are *optional* supplements to the Perspective lecture:

- C. S. Lewis, “Language of Religion,” *Christian Reflections*, pp. 129-141.  
This essay explores the capacities of different kinds of language to point to reality, arguing that poetic language is no less true to reality than scientific, propositional, or quantitative language.
- If you’re interested in more on the how the perspective lecture applies to scripture, and to biblical translation, you might be interested in the following Sunday message I presented a couple years ago at Crosswalk Community Church, now Grace Communion Surrey Hills: “Echoes of the Word made Flesh.”
  - Slides (10 MB): [kerrymagruder.com/pdf/Word-made-flesh.pdf](http://kerrymagruder.com/pdf/Word-made-flesh.pdf)
  - Audio: <http://kerrymagruder.com/pdf/01%20Echoes%20of%20the%20Word%20made%20Flesh.m4a>
  - Handout: [kerrymagruder.com/pdf/Two-Bible-Paradigms.pdf](http://kerrymagruder.com/pdf/Two-Bible-Paradigms.pdf)
- Kerry Magruder, “The Demarcation Dilemma”:  
<http://kerrymagruder.com/TH504/Demarcation.pdf>  
This is an exercise in defining science that expands upon Section 5 in the Week 3 Perspective lecture. It might be interesting to you if that section on “Science and the Sciences” piqued your interest.
- Myk Habets, “Realist Theology and Theological Realism,” in *Theology in Transposition: A Constructive Appraisal of T. F. Torrance* (2013), pp. 95-121.  
This chapter compares and contrasts the realist approach of Torrance with the propositional approach of the great evangelical theologian Carl F. H. Henry.

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## WEEK 3 READINGS

Download the Seminar Notes for this week's readings, and refer to them while reading:  
<http://kerrymagruder.com/TH504/Wk3-SeminarNotes.pdf>

Conduct a close reading of the following *required* reading assignments:

1. *Space, Time and Resurrection*, "Introduction," 1-26.
2. "Biblical interpretation exercise – Galileo" (PDF): <https://kerrysloft.com/history-of-science/biblical-interpretation-exercise-galileo/>. In this reading, and the following Application assignment, we begin to apply perspectives on language and reality to the historical case study of Galileo and the Bible and science. Brother Guy Consolmagno, Director of the Vatican Observatory, begins many conversations on Galileo with the beguiling assertion: "Everything you know about Galileo and the Church is wrong, but the truth doesn't make the Church look any better."

*Imagine:* The year is 1616. You are a Cardinal, and a member of the Holy Congregation of the Index. How you interpret the Bible with respect to Galileo will have repercussions for many generations.

*Tip:* Focus on pp. 1-5 and pp. 9-10. There are two versions: a student's version and an instructor's version. Read the instructor's version, which has comments in yellow in the margins. I recommend downloading both versions: you may want to read main text using the student's version for readability, and compare with the instructor's version only for the annotations. If you have extra time, you may enjoy the 3 pages devoted to Kepler's discussion. Kepler covered similar ground to Galileo's *Letter to the Grand Duchess* (pp. 6-8).

*Ministry Tip:* This PDF was written to be used over four sessions in an adult Sunday School class or Community Discussion Group on the Bible and science.

Enjoy the following *optional* readings:

- In 2015-2016, my research assistant Brent Purkale and I curated a major Galileo exhibit at the University of Oklahoma. The books on display throughout the exhibit are pictured, with descriptive captions, on our Lynx Open Ed website, along with related educational resources. One of the many galleries of that exhibition was devoted to "The Galileo Affair." It was divided into two sections: "The Bible and Science" and "Galileo and the Church":
  - Exhibit gallery page: "The Galileo Affair," <http://lynx-open-ed.org/affair>  
Read the text on this page, which was composed for signage in the exhibit. Click links on this page to the following books, to read their captions, as well as links to any additional books that interest you:

- Augustine, *De civitate Dei* (Venice, 1489)
- Thomas Aquinas, *Summa theologiae* (Nuremberg, 1496)
- Giordano Bruno, *Le Ciel Reformé* (Paris, 1750)
- Michael Servetus, *De Trinitatis Erroribus* (ca. 1700), ms.
- Diego de Zuniga, *In Iob commentaria* (Rome, 1591), 2d. ed.
- Galileo, *Nov-antiqua sanctissimorum patrum* (Strassburg, 1636)
- Tommaso Campanella, *Apologia pro Galileo* (Frankfurt, 1622)
- Paolo Foscarini, “Epistola circa Pythagoricorum, & Copernici opinionem de mobilitate terrae, et stabilitate solis,” in Galileo, *Systema cosmicum* (Avignon, 1635), 465-495.
- Galileo, *Dialogo sopra i Due Massimi Sistemi del Mondo* (Florence, 1632)
- The following Learning Leaflets were prepared to provide auxiliary information for the “Galileo Affair” gallery:
  - “Banned Books of the Scientific Revolution,” <http://lynx-open-ed.org/OERs/SP-Banned-books.pdf>
  - “The Trial of Galileo,” <http://lynx-open-ed.org/OERs/SP-Galileo-Trial.pdf>
  - “Augustine: The Bible and Science,” <http://lynx-open-ed.org/OERs/Augustine-Bible-Science-LL.pdf>

Now refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: “Constellations: The Winter Hexagon”*

- The Winter Hexagon: <https://kerrysloft.com/nature/the-winter-hexagon/>
- “He knows the number of stars, and calls them each by name.” (Psalm 147:4)
- Go outside and find Orion and the other constellations of the Winter Hexagon.

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## WEEK 3 APPLICATION: THE GALILEO AFFAIR



“Galileo before the Holy Office” by Joseph-Nicolas Robert-Fleury (c. 1850)  
Luxembourg Museum

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*“In matters that are obscure and far beyond our vision, even in such as we may find treated in Holy Scripture, different interpretations are sometimes possible without prejudice to the faith we have received. In such a case, we should not rush in headlong and so firmly take our stand on one side that, if further progress in the search of truth justly undermines this position, we too fall with it. That would be to battle not for the teaching of Holy Scripture but for our own, wishing its teaching to conform to ours, whereas we ought to wish ours to conform to that of Sacred Scripture.”*

*– Augustine, Literal Meaning of Genesis, Bk. I, ch. 18; 1:41; cf. Bk. I, ch. 19; 1:41-42.*

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**Topics:** *The significance of Galileo’s achievement in science and method, and of the Trial of Galileo for the modern belief that science and religion are locked in an inevitable conflict, rather than in relations of variegated complexity.*

### **Follow these steps:**

As mentioned last week, usually there will be one slideshow presentation, about an hour long, that has been prepared specifically for the Application assignment. Instead of that typical lecture presentation, for Weeks 1 and 2 we are using videos which I have previously prepared for other audiences rather than specifically for this course. Today’s lesson is comprised of two videos, with a combined length of about 68 minutes:

1. Interpretation (5:08 mins): [kerrymagruder.com/hsci/13-Galileo/interpretation.html](http://kerrymagruder.com/hsci/13-Galileo/interpretation.html)  
Everyone knows something about Galileo, but few people really understand the circumstances of his life. For example, what did Galileo do at the Leaning Tower of Pisa? Many people believe Galileo dropped two objects of differing weights from the top of the leaning tower of Pisa, in order to prove that they would strike the ground at the same time. However, there is no evidence that this event ever happened; it's just part of the Galileo mythology, an urban legend. Moreover, because of air resistance, the two objects would not have struck the ground at the same time, and Galileo knew it. Only in a vacuum, such as for astronauts on the Moon, does Galileo's law of free fall apply. Besides, the conclusions that such an experiment could suggest had already been explained in the Roman-era, in the critique of Aristotle by John Philoponos. So who was Galileo? How can we strip away our misconceptions? What was he really like? This short "Interpretation" video was made for my undergraduate students to watch at the end of a week devoted to Galileo. It lists 9 different misconceptions that are common today. How many of these misconceptions have you encountered? How would you reply to a friend who asks you about them? Watch this brief video to prepare you to get more out of the main lecture (next video). Or watch it after the main video, to sharpen your focus on the significance of what you have learned.
2. Main Application Lecture – Guided tour of Galileo's life and works:  
<https://vimeo.com/28637522> (stop after 1 hour and 3 minutes).  
I've presented versions of this talk at Fermilab in west Chicago and at many universities; this version was recorded at NASA headquarters in Langley, Virginia. This is the overall story of Galileo, including his trial, compressed into a one-hour package. If you listen closely, answers to most of the misconceptions mentioned above are contained in this presentation. Skip the Q&A at the end, to keep it about an hour long. You may find it interesting to consider how the presentation is crafted specifically to communicate to professional scientists and engineers. It undermines the "conflict thesis" as a narrative for Galileo's significance, and provides an alternative counter-narrative based around his innovations in methodology.  
*Accompanying handout:* <http://kerrymagruder.com/TH504/GalileoTour.pdf>  
Outline:
  1. Foundations of Mathematical Physics
  2. Early Years
  3. The Telescope and Starry Messenger
  4. Triumph in Rome
  5. Scripture and Copernicanism
  6. A New Pope and a New Dialogue
  7. The Trial of Galileo
  8. Later Years
3. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
  - Complete your reflection and post comments on the Application Forum.
  - Make your Application Gradebook Declaration.



### Links and Further Reading (optional):

- For more information on Galileo, check out my entry on Galileo in the *Zondervan Dictionary of Science and Religion*.
- In Week 1, we watched a video on the Flat Earth Myth from my Janux class at OU. That same class, “History of Science to Newton,” included a week on Galileo. If you’re interested, the following videos from that week will give you more context about Galileo:
  1. [Starting Assumptions](#) (3:36 mins).
  2. [Galileo’s Works](#) (9:06 mins). A quick overview of Galileo’s published works, showing the OU copy of each book Galileo published.
  3. [The Galileo Affair](#) (9:30 mins). An all-too-brief caution against oversimplification.
  4. [Interpretation](#) (5:08 mins). Questions for reflection. (This is the video assigned above.)
- Galileo’s World exhibit: <https://lynx-open-ed.org/glance>  
My “Galileo’s World” website offers a comprehensive account of Galileo’s life and works in historical context. Use this overview page as the jumping off point to browse any of the 20 galleries we prepared for a major exhibit held at 7 different locations across OU’s 3 campuses in 2015-2016. Among this week’s optional reading assignments (above), you’ve already encountered the gallery on “The Galileo Affair.” If you wish to browse further, “Galileo and China,” “Controversy over the Comets,” and “The New Physics” are all relevant to science and religion themes as well. To find the short essays on Galileo’s Trial, click “Search OERs” on the main navigation menu, then in the right sidebar select “The Galileo Affair” from the “Exhibit Gallery” filter.
- Stillman Drake, *Galileo: A Very Short Introduction* (Oxford). Stillman Drake was a prominent Galileo scholar. His “Very Short Introduction” remains an accessible introduction to Galileo, and it is particularly helpful on Galileo’s conflict with the Church. Read this little book from Oxford’s acclaimed “Very Short Introduction” series along with my discussion guide: <https://lynx-open-ed.org/node/98>. This book and discussion guide would be suitable for use in a science and religion discussion group.

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## WEEK 3: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 3 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.



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## WEEK 3: WEBSITE TASK #2

This week, aim to complete Website Task #2.  
Refer to [Appendix T](#) for instructions.

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## WEEK 3: LAST WORDS

Refer to [Appendix R](#) for instructions.

## Week 4: Knowing *Kata-physin*

Assignment	Checklist	Description
Jan 20	This week's assignments open	
<b>Perspective</b> Monday-Tues Jan 27 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Knowing <i>Kata-physin</i></b> <ul style="list-style-type: none"><li>• STR ch. 8a: 159-169.</li><li>• "Preface" to <i>Theological Science</i></li></ul> ----- <i>Cross-references</i> <i>*Incarnation, pp. 1-14, E1 257-259; 202.</i>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Interdisciplinary Relations: Art, Astronomy, Music and Theology in Galileo's World</b>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(The first Christmas gifts)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Feb 8, 2020	Last date to complete this week's regular assignments.	

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## WEEK 4 PERSPECTIVE: KNOWING KATA PHYSIN



"The Old King" by Georges Rouault (1937)  
Carnegie Museum of Art, Pittsburgh Pennsylvania

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*"Rouault was able to see these dreary figures without pity or despair because he saw beyond the surface of things. These lonely figures were part of a larger story; he was able to look into their suffering and see Jesus. In many ways Rouault's religious faith consisted of a life-long meditation on the incarnation of Christ. What gave him hope was the presence of Christ..." – William Dyrness*

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**Topics:** Knowing reality kata physin, the nature of dogmatics, interdisciplinary relations.

### Outline:

1. Introduction
2. *Kata physin*
3. C. S. Lewis on knowing
4. The Known and the Unknown
5. Interdisciplinary Relations
6. Conclusion

### Steps:

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Week 4 Perspective video presentation, "Knowing *Kata-physin*," and/or download the PDF with slides and script:

1. Video: <https://vimeo.com/385138802>
2. Slides with script (PDF): <http://kerrymagruder.com/TH504/TH504-Week4a-Kata-physin.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 4 READINGS

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*“From this point of view the emphasis of the early Church upon physis (the real nature of things, or simply ‘reality’) and upon thinking kata physin (in accordance with the real nature of things), or what we might call ‘cataphysic thinking’, is entirely understandable, for it meant the rejection in the most downright way of all thinking in terms of abstract ‘possibilities’ in favour of thinking in terms of concrete realities or actualities. That is to say, early Christian theologians applied to God the same principle which the Alexandrian scientists employed when they allowed the real nature (physis) of what they were investigating to determine the proper way in which to think about it, for that was, they held, the only true or real way to think scientifically (epistēmōnikōs).”*  
– Thomas F. Torrance, *Space, Time and Resurrection*, p. 80

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Download the Seminar Notes for this week’s readings, and refer to them while reading:  
<http://kerrymagruder.com/TH504/Wk4-SeminarNotes.pdf>

Conduct a close reading of the following *required* reading assignments:

- *Space, Time and Resurrection*, “The Lord of Space and Time,” ch. 8a, pp. 159-169.
  - Start at the beginning of the chapter, and read up to “That applies no less in the field of biblical inquiry than in any other,” at the end of a paragraph on p. 169.
- Thomas F. Torrance, “Preface,” in *Theological Science* (London, New York: Oxford University Press, 1969), vii-xviii; #1969-263a.  
Bibliographic record: <https://tftorrance.org/1969-263>  
Download PDF from the GCS course link.

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*This week’s Seminar Notes include cross-references to Incarnation, pp. 1-14, E1 257-259; 202.*

Enjoy the following *optional* supplemental readings:

- Thomas F. Torrance, “Incarnation and Atonement in the Light of Modern Scientific Rejection of Dualism,” delivered to the Theological Students' Forum of Princeton Theological Seminary, 1992; in *Preaching Christ Today: The Gospel and Scientific Thinking* (Grand Rapids, Michigan: W. B. Eerdmans, 1994), 41-71; #1994-571b. Bibliographic record: <https://tftorrance.org/1994-571b>  
Download PDF from the GCS course link.

Now refer to Appendix N: Regular Weekly Assignments and Appendix P: The Weekly Reading Notebook Assignment for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: “The First Christmas Gifts”*

- Read the following blog post, with an attached PDF:  
<https://kerrysloft.com/family/the-first-christmas-gifts/>  
Have you ever held a piece of myrrh or frankincense in your hand, felt its texture, or smelled its fragrance?

By the way, a link at this post points to a video about the historical background to the magi that I use in the same undergraduate history of science course as the Flat Earth and Galileo videos you have already watched. If you’re interested, look for the link to “Stars over Ancient Babylon.” There’s also a message on the magi I gave at Crosswalk (now Surrey Hills GCI): slides, <http://kerrymagruder.com/loft/magi-30min.pdf>; audio, <http://kerrymagruder.com/loft/magi.zip>. If you’re more interested in the star itself, check out an article I contributed to the *Zondervan Dictionary of Science and Religion*.

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## WEEK 4 APPLICATION: INTERDISCIPLINARY RELATIONS



"Raphaelesque Head Exploding" by Salvador Dali (1951)  
Scottish National Gallery of Modern Art, Edinburgh

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*"We must try to recapture the transdisciplinary nature of theology... theology should strengthen the soul of the university by helping to nourish every academic discipline and every part of the curriculum... Imagine a sacred theology faculty whose goal is to deepen the worship and love of God through advanced academic study in every discipline... Theologians cannot truly be theologians unless they are learning from the entire body of faculty in the university."*

*– Glanzer, Alleman and Ream, Restoring the Soul of the University: Unifying Christian Higher Education in a Fragmented Age*

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**Topics:** Explore how interdisciplinary relations can be properly grounded in kata-physin methods, rather than reflecting superficial ad hoc encyclopedic mash-ups.

### Outline:

1. Introduction
2. The Tuscan Setting
3. Art and Astronomy
4. Music and Astronomy
5. Theology and Astronomy
6. Conclusion (with additional theological reflections)

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 4 Application video presentation, “Interdisciplinary Relations: Art, Astronomy, Music and Theology in Galileo’s World,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/385168333>
  2. Slides: <http://kerrymagruder.com/TH504/TH504-Week4b-Interdisciplinary.pdf>
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

*Food for thought:* Do the examples of *kata physin* connections between *disciplines* have lessons that transfer to *professions*? What are the *kata physin* connections between pastors/churches and other vocations in the community? Think of how the first hospitals for the poor were founded by St. Basil and his colleagues in the 4th century; are there ways that a guild of pastors or association of churches in your community might support those working in health care? Think of the parish model of ministry, where a pastor would be on a first-name basis with physicians, police officers, and other service providers in the parish; are there ways that a guild of pastors or association of churches in your community might support the local police and other workers in human services? Are there ways in which the pastoral profession might serve city officials? What are the *kata physin* connections in such cases? Works of mercy? The great commandment?

Optional supplementary resources:

- For an analogous lecture that takes its examples from health care, see “Galileo and a Culture of Innovation”: <https://kerrysloft.com/nature/galileo-and-a-culture-of-innovation/>
- Make your own “Alberti box”: <http://kerrymagruder.com/TH504/Alberti-box.pdf>
- “Art and Astronomy Walking Tour” (overview): <https://lynx-open-ed.org/OERs/Art-and-Astronomy-Walking-Tour.pdf>
- Jonathan Annis, “Kepler suite”: <http://lynx-open-ed.org/cosmicdance>
- Jeremy Begbie, “Incarnation, Creation and New Creation: What T. F. Torrance offers to a Theological Re-visioning of the Arts,” Keynote presentation, Thomas F. Torrance Theological Fellowship, Annual Meeting 2018. Video: <https://tftorrance.org/2018-JB-2>



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## WEEK 4: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 4 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 4: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 4: LAST WORDS

Refer to [Appendix R](#) for instructions.

## Week 5: Being and Relation

Assignment	Checklist	Description
Jan 27	This week’s assignments open	
<b>Perspective</b> Monday-Tues Feb 3 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Being and Relation</b> <ul style="list-style-type: none"><li>• STR 77-79 (laws); 88-93 (time); ch. 6a: 123-135.</li><li>• (Lewis, “Religion and Science,” <i>God in the Dock</i>; and “The Seeing Eye,” <i>Christian Reflections</i>)</li></ul> <hr/> <i>Cross-references</i> <i>*Incarnation, 216-220</i>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Relational Physics (and Genesis 1)</b> <ul style="list-style-type: none"><li>• Genesis 1:1-2:4</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update “Love in the Cosmos” with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(Our address in the universe)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Feb 15, 2020	Last date to complete this week’s regular assignments.	

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## WEEK 5 PERSPECTIVE: BEING AND RELATION



Icon of the Holy Trinity, Andrei Rublev (c. 1400)  
Tretyakov Gallery, Moscow

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*“Here we discern the theological significance of the intention in Byzantine art in a deliberate reversal of the natural perspective in depicting the dais on which the figure of Christ is made to stand, lest it should be enclosed within converging lines, which when produced meet at a finite point. When the lines depicting the dais are made to diverge, against the natural perspective, then when produced they never meet but go out into infinity. At one end of the ikon or mosaic the figure of Christ stands in bounded space and time, but at the other end he transcends all such limitations. He became man without ceasing to be God, and lived within our physical and historical existence without leaving the throne of the universe.”*

– Thomas F. Torrance, *Space, Time and Resurrection*, pp. 131-132

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**Topics:** Being (“why should equations fly?,” Hawking); Incarnation and Creation (*creatio ex nihilo*, *creatio continua*); and container and relational views of space and time in Patristic cosmology, Medieval cosmology, and Newtonian cosmology. Open order, open universe vs. mechanical clockwork determinism.

**Outline:**

1. Introduction
2. “Why should equations fly?”
3. Incarnation and Creation
4. Ancient and Medieval Space and Time
5. Newtonian Space and Time
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Week 5 Perspective video presentation, “Being and Relation,” and/or download the PDF with slides and script.

Because of the difficulty and fundamental importance of the material, the presentation is longer than usual, nearly an hour and a half (89 minutes). You may want to take a break somewhere in the middle.

1. Video: <https://vimeo.com/386569417>
2. Slides/script PDF: <http://kerrymagruder.com/TH504/TH504-Week5a-Being-and-Relation.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 5 READINGS

Download the Seminar Notes for this week’s readings (if available), and refer to them while reading.

Conduct a close reading of the following *required* reading assignments:

- *Space, Time and Resurrection*, ch. 3, pp. 77-79 (Natural laws).
  - Start with the paragraph on p. 77 that begins: “Let us consider what it means to think of the creation.” Read up to “radically new Christian humanism,” at the end of a paragraph on p. 79.
- *Space, Time and Resurrection*, ch. 4, pp. 88-93 (Time).

- Start with the paragraph on p. 88 that begins: “The kind of time we have in this passing world...” Read up to “of the Scriptures or of the historical events they record,” at the end of a paragraph on p. 93.
- *Space, Time and Resurrection*, ch. 6a, pp. 123-135.
  - Start at the beginning of chapter 6, “The Nature of the Ascension Event.” Read up to the end of section 1 of chapter 6 on p. 135.
- Genesis 1:1 – 2:4.

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*This week the Seminar Notes contain cross-references to Incarnation, pp. 216-220.*

Enjoy the following optional supplemental reading:

- C. S. Lewis, “Religion and Science,” *God in the Dock*, pp. 72-75.
- C. S. Lewis, “The Seeing Eye,” *Christian Reflections*, 167-176.

Now refer to Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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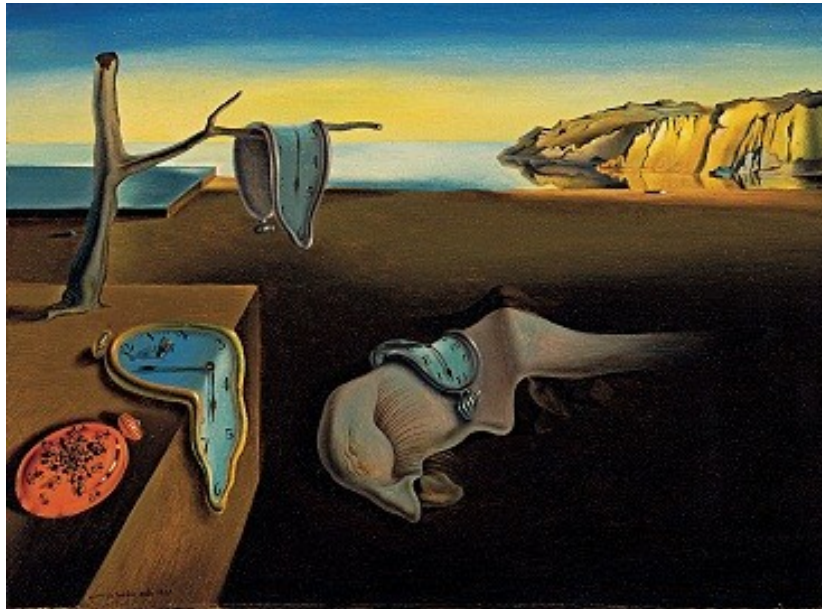
*Optional — Doxological Science Activity: “My address in the universe”:*

<https://kerrysloft.com/education/my-address-in-the-universe/>

- This activity includes material relevant to the question: “Is the Immensity of the Universe a modern discovery?” (Answer: no)

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## WEEK 5 APPLICATION: RELATIONAL PHYSICS (& GENESIS 1)



"The Persistence of Memory" by Salvador Dali (1931)  
Museum of Modern Art, New York City

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*"...at this moment it seems as though science will never be able to raise the curtain on the mystery of creation. For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance, he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries."*

— Robert Jastrow, *God and the Astronomers* (1978), p. 116

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**Topics:** What lessons did TFT draw from the achievements of Maxwell and Einstein? How did he interpret the significance of Big Bang cosmology? What about Genesis?

### Outline:

1. Introduction
2. Maxwell and Field Theory
3. Einstein and Relativity
4. The Big Bang
5. Genesis 1 and Cosmology
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 5 Application video presentation, “Maxwell, Einstein, the Big Bang, and the Bible,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/389554920>
  2. Slides/script PDF: <http://kerrymagruder.com/TH504/TH504-Week5b-RelationalPhysics.pdf>
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

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## WEEK 5: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 5 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 5: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 5: LAST WORDS

Refer to [Appendix R](#) for instructions.

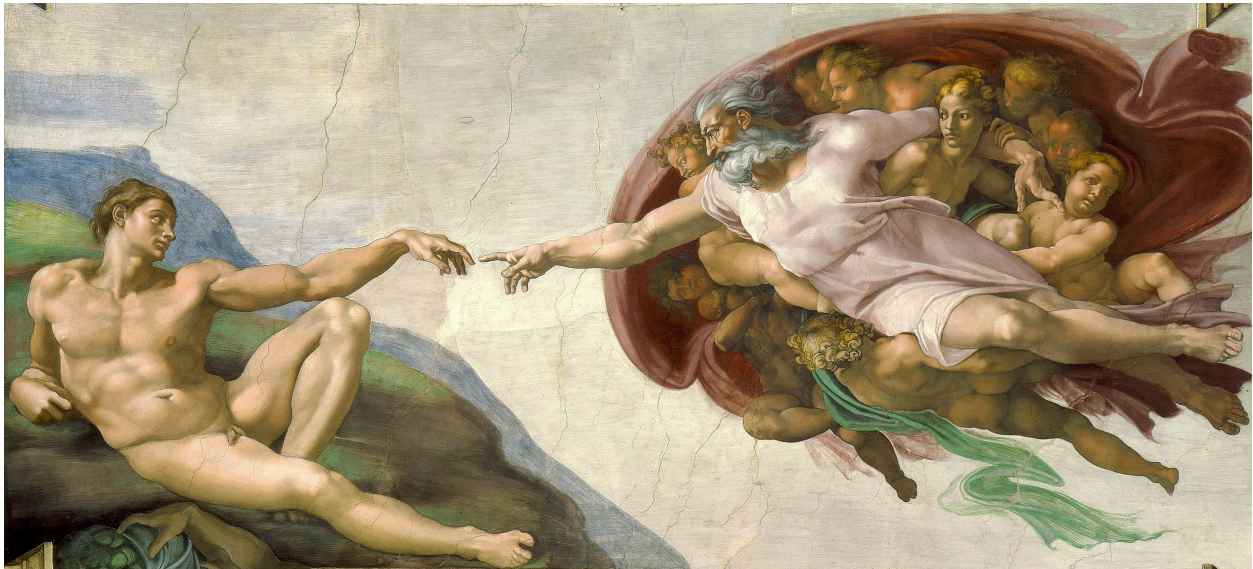


## Week 6: Divine Freedom and Contingent Order

Assignment	Checklist	Description
Feb 3	This week’s assignments open	
<b>Perspective</b> Monday-Tues Feb 10 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Divine Freedom and Contingent Order</b> <ul style="list-style-type: none"><li>• Torrance, “Divine and Contingent Order”</li><li>• (G. K. Chesterton, “Ethics of Elfland,” <i>Orthodoxy</i>.)</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Geohistory</b> <ul style="list-style-type: none"><li>• (Rudwick, “Genesis and Geology.”)</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update “Love in the Cosmos” with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(You are a Meteorite)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Feb 22, 2020	Last date to complete this week’s regular assignments.	

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## WEEK 6 PERSPECTIVE: DIVINE FREEDOM AND CONTINGENT ORDER



"Creation of Adam" by Michelangelo (c. 1512)  
Sistine Chapel ceiling, Vatican

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*"The universe is contingent for it does not exist of necessity: it might not have been at all and might very well have been different from what it is. Yet in coming to be, the universe is characterised by an open-structured order which partakes of contingency." Thomas F. Torrance, "Divine and Contingent Order," in Arthur Peacocke, The Sciences and Theology in the 20th Century (1981), p. 85.*

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**Topics:** What is "contingent order," and why is it a corollary of divine freedom? "Contingent order" refers to intelligible order that might have been otherwise. BOTH the regularities of the natural order AND the rare occurrences are contingent. Contingent order is the opposite of both chance and necessity. Unlike necessity, contingent order might have been otherwise. Unlike chance, contingent order is intelligible, in retrospect.

### Outline:

1. Introduction
2. Divine Freedom
3. Contingent Order
4. Three streams: Science, History of Science, Theology
5. Three illustrations: Plurality of Worlds, Anthropic Principle, Geohistory.
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Week 6 Perspective video presentation, “Divine Freedom and Contingent Order,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/390016497> (1 hour, 58 minutes)
  2. Slides/script (PDF): <http://kerrymagruder.com/TH504/TH504-Week6a-contingent-order.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 6 READINGS

Download the Seminar Notes for this week’s readings (if available), and refer to them while reading.

Conduct a close reading of the following *required* reading assignments:

- Thomas F. Torrance, “Divine and Contingent Order,” in Arthur Peacocke, *The Sciences and Theology in the 20th Century* (1981).

Enjoy the following *optional* readings:

- Martin J. S. Rudwick, “Genesis and Geology,” Baylor lecture.
- “Would you Baptize an Extra-Terrestrial?” Bro. Guy Consolmagno.
- Kerry Magruder, “The idiom of a six day creation and global depictions in Theories of the Earth,” in Martina Kölb-Ebert, ed., *Geology and Religion: A History of Harmony and Hostility* (London: Geological Society of London, 2009), 49-66.  
This brief article is an example of the versatility of hexameral idiom (i.e., the interpretation of Genesis 1) in early modern geology and cosmology.

Now refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: “You are a Meteorite”*

- <https://kerrysloft.com/family/christmas-gifts-you-are-a-meteorite/>

## WEEK 6 APPLICATION: GEOHISTORY



William Buckland, "The Geological Lecture Room, Oxford" (1823)  
History of Science Collections, University of Oklahoma

*"The impact of de Luc's theistic commitments can be seen in the radical contingency that he attributed to earth history, and which he grounded in God's ultimate role as creator of everything. As de Luc conceived it, earth history at every stage could have taken another course, with a different outcome, without of course abrogating the ordinary laws of nature. It followed that the sequence of events could not, even in principle, be inferred from the ahistorical laws of physics, as both Hutton and Buffon implied: there was too much contingency in earth history, as in human history, for any such determinism. Rather than imposing top-down some grand conclusion of what "must" have happened, based on unchanging laws of nature, it was necessary, in de Luc's view, to assemble bottom-up the evidence of nature's documents and archives, which showed what in fact had happened. So the new way of analyzing the physical traces of earth history, applying the methods of reconstruction being used for human history (including biblical scholarship) was not just an effective heuristic but was rooted in an ultimately divine reality."*

– Martin J. S. Rudwick, "Genesis and Geology," Baylor lecture.

**Topic:** The emergence of contingent history with the historical sciences of the Earth.



**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the following Week 5 Application video presentation, “Geohistory,” and/or download the PDF with slides and script. This is the overall story of how the idea of contingent order came to take root in the emergence of geology, compressed into a brief account. If you listen closely, you will hear close resonances with the previous lecture. As with the NASA lecture on Galileo, you may find it interesting to consider how the presentation is crafted specifically to communicate to a public audience of science students, scientists and science educators. The more familiar you are with typical accounts of geology as the emergence of “deep time,” as portrayed in most geology textbooks and popularizations, the more novel and even subversive this presentation will appear. It undermines the “conflict thesis” as a narrative for the emergence of geology, but more than that, it shifts the focus away from container notions of “deep time,” and provides an alternative counter-narrative based around contingent order, or “geohistory.” With your acquaintance with the theological perspectives introduced in this course, you’ll be able to see how this lecture’s account of the emergence of geology explains why so many evangelical Christians found the exciting 19th-century discoveries in geohistory both exciting and theologically appealing.

**Outline:**

1	Martin Rudwick	Permian Mass Extinction
2	Georges Cuvier	Reality of Extinction
3		Directionalist Synthesis
4	Louis Agassiz	The Devonian Controversy
5		Ice Ages
6	Observations on Science	
7	Afterword	

- Video: <https://kerrysloft.com/education/early-earth-science-controversies-mass-extinctions-and-ice-ages/>
  - Slides: <http://kerrymagruder.com/Rudwick.pdf>
3. Complete your reflection and post comments on the Application Forum.
  4. Make your Application Gradebook Declaration.

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## WEEK 6: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 6 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 6: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 6: LAST WORDS

Refer to [Appendix R](#) for instructions.

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*Congratulations on being half-way through the course lectures!*

You have just finished one of the most significant weeks of the course, for in Week 6 we put together many of the building blocks introduced in earlier weeks. The perspective of “Divine Freedom and Contingent order,” in my experience, takes a while to assimilate into one’s way of thinking, but it’s a powerful and far-reaching part of your developing Trinitarian theological instinct. In contrast to an issues-based course which would invoke its principles on an *ad hoc* basis, rather, by starting from the Incarnation — the ultimate singularity — we learn to sniff out and forever abjure necessitarian thinking. Historically, as the principle of contingent order worked its way into wider culture, it unleashed the empirical methods of modern science as never before, and along with empirical methods, it led to the development of the historical sciences. In this way the sensibility of “geohistory” described this week is an echo of the Incarnation; a welcoming (as with the Big Bang) of contingent order.

Next, in Week 7, to start off the second half of the course lectures, it’s time to revisit the God and Nature models introduced in the first lecture, “Thinking Theologically.” We’ll explore them in greater detail, and also see that to benefit from them, our imagination is as necessary as our reason. So we conclude next week’s perspective lecture with the idea of “paradigm,” “plausibility structure,” or “social imaginary,” which sets us up to appreciate how Lewis created imaginative fiction to help modern readers begin to comprehend, deep in their bones, that Christianity is neither a tribal nor a planetary religion, but a cosmic reality.

I’m looking forward to your reflections in the forums!

## Week 7: Imagining God and Nature

Assignment	Checklist	Description
Feb 10	This week's assignments open	
<b>Perspective</b> Monday-Tues Feb 17 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Imagining God and Nature</b> • C. S. Lewis, <i>The Problem of Pain</i> , ch 1: 13-25.
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b><i>Out of the Silent Planet</i></b> • C. S. Lewis, <i>Out of the Silent Planet</i> (first 84 pages)
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(Scale of the Solar System)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Feb 29, 2020	Last date to complete this week's regular assignments.	



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## WEEK 7 PERSPECTIVE: IMAGINING GOD AND NATURE



"Starry Night" by Vincent Van Gogh (1889)  
Museum of Modern Art, New York City

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*"After having proclaimed the omnipotence of scientific observation and deduction for eighty years with childlike enthusiasm, and after asserting that for its lenses and scalpels there did not exist a single mystery, the nineteenth century at last seems to perceive that its efforts have been in vain, and its boast puerile. Man is still walking about in the midst of the same enigmas, in the same formidable unknown, which has become even more obscure and disconcerting since its habitual neglect. A great many scientists and scholars today have come to a halt discouraged. They realize that this experimental science, of which they were so proud, is a thousand times less certain than the most bizarre theogony, the maddest metaphysical reverie, the least acceptable poet's dream, and they have a presentiment that this haughty science which they proudly used to call 'positive' may perhaps only be a science of what is relative, of appearances, of 'shadows' as Plato said, and that they themselves have nothing to put on old Olympus, from which they have removed the deities and unhinged the constellations."* – Albert Aurier (1865-1892)

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**Topics:** Models of God and Nature, cosmologies, paradigms, social imaginaries

**Outline:**

1. Introduction
2. Review the Models
3. Models in more detail
4. Test the Models
5. Filters, Paradigms, and Imaginaries
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Perspective video presentation, “Imagining God and Nature,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/390238344> (1 hr, 21 mins)
  2. Slides/Script (PDF): <http://kerrymagruder.com/TH504/TH504-Week7a-God-and-Nature.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 7 READINGS

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*“He found it night by night more difficult to disbelieve in the old astrology: almost he felt, wholly he imagined, ‘sweet influence’ pouring or even stabbing into his surrendered body.... A nightmare, long engendered in the modern mind by the mythology that follows in the wake of science, was falling off him. He had read of ‘Space’: at the back of his thinking for years had lurked the dismal fancy.... Older thinkers had been wiser when they named it simply the heavens....”*

– Ransom, in C. S. Lewis, *Out of the Silent Planet*, pp. 31-32.)

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Download the Seminar Notes for this week’s readings (if available), and refer to them while reading.

*Note:* I recommend you watch the Application lecture this week BEFORE starting to read *Out of the Silent Planet*.

Conduct a close reading of the following *required* reading assignment:

- C. S. Lewis, *Out of the Silent Planet* (first 84 pages).

The end of ch. 13 (p. 84) marks a possible stopping point this week. Read as far as you wish; you will finish the novel next week. With the audiobook version, you can listen up through ch. 13 in only 2 hours and 43 minutes. The entire audiobook is 5 hours, 31 minutes for all 160 pages.

*Out of the Silent Planet*, the first volume of C. S. Lewis’ Ransom Trilogy, illustrates some of the major themes of Lewis’ extensive engagement with evolution, scientism, materialism, reductionism, ecology and conservation, and other issues of faith and science.

Enjoy the following *optional* resources:

- C. S. Lewis, *The Problem of Pain*, ch 1: 13-25.

How do the eloquent opening pages of *The Problem of Pain* relate to the “Models,” “Paradigms,” or “Imaginaries” of this week’s Perspective presentation?

- Watch the movie *Tree of Life*, directed by Terrence Malick.

IMDB: <https://www.imdb.com/title/tt0478304>

*The Tree of Life* divides people. Many can't stand it, because they miss the point. So I think a few tips for watching it can be helpful. Watch it the first time with a good audio system and/or with subtitles turned on. This is essential, for there are many brief clips that appear suddenly, and each time they are accompanied by whispers. If you miss the contents of the whispers you will miss the point of the film. So it's essential to have a system that allows you to discriminate the quiet whispers —or at least to read them from the subtitles. Here's a hint: they are inspired by the book of Job. Another tip: Be on the lookout for metaphors of light (as explained in the Perspective lecture) and for

the flame at the heart of things (the divine presence, through the Spirit, working in creation, hiddenly, beneath surface appearances, to bring us to the new creation). This movie articulates an alternative perspective on the history of the universe to the atheist sketch Lewis outlines in the opening pages of *The Problem of Pain*. These two works are superbly complementary, and make a great pairing if you have a science and religion discussion group.

Now refer to Appendix N: Regular Weekly Assignments and Appendix P: The Weekly Reading Notebook Assignment for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

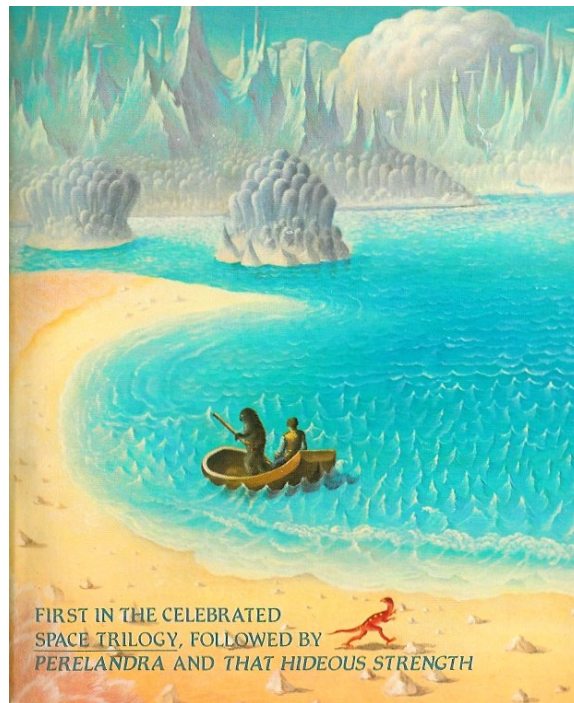
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*Optional — Doxological Science Activity: “Scale of the Solar System”*

- An activity for the sizes and distances of the Earth and Moon is included in the Perspective presentation. If the Sun were 2 yards (or 2 meters) diameter, what would be the sizes and distances of all the planets? Could you make a scale model on a football field, or in your neighborhood? Use this web page to help with the calculations: <https://thinkzone.wlonk.com/SS/SolarSystemModel.php>

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## WEEK 7 APPLICATION: *OUT OF THE SILENT PLANET*



Cover art for *Out of the Silent Planet* (Collier Books, 1986)

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*The medieval universe, while unimaginably large, was also unambiguously finite.... The word 'small' as applied to Earth thus takes on a far more absolute significance... ... to look out on the night sky with modern eyes is like looking out over a sea that fades into mist, or looking about one in a trackless forest—trees forever and no horizon. To look up at the towering medieval universe is much more like looking at a great building. The 'space' of modern astronomy may arouse terror, or bewilderment or vague reverie; the spheres of the old present us with an object in which the mind can rest, overwhelming in its greatness but satisfying in its harmony... You must go out on a starry night and walk about for half an hour trying to see the sky in terms of the old cosmology.... As a modern, you located the stars at a great distance. For distance you must now substitute that very special, and far less abstract, sort of distance which we call height.... the Medieval Model is vertiginous."*

– C. S. Lewis, *The Discarded Image*

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**Topics:** Lewis, Science Fiction, Cosmological Imaginaries, Ransom trilogy.

**Outline:**

1. Mars Today
2. Mars in History
3. The Ransom Trilogy
4. *Out of the Silent Planet*
5. What to look for
6. Conclusion

**Objectives:**

1. To increase your desire to read *Out of the Silent Planet*.
2. To help you appreciate or get more out of reading *Out of the Silent Planet*.
3. To develop the concept of social or visual imaginaries from the first lecture.

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 7 Application video presentation, and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/390238525> (41 mins)
  2. Slides/Script (PDF): <http://kerrymagruder.com/TH504/TH504-Week7b-reading-OSP.pdf>
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

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## WEEK 7: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 7 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 7: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 7: LAST WORDS

Refer to [Appendix R](#) for instructions.



## Week 8: Stratified Reality

Assignment	Checklist	Description
Feb 17	This week's assignments open	
<b>Perspective</b> Monday-Tues Feb 24 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Stratified Reality</b> <ul style="list-style-type: none"><li>• <i>Out of the Silent Planet</i>, pp. 85-160 (complete the novel).</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Reality in Many Dimensions</b> <ul style="list-style-type: none"><li>• Stratified Reality handout (explained in the presentation).</li><li>• C. S. Lewis, <i>Miracles</i>, ch. 8, "Miracle and the Laws of Nature"</li><li>• (Loren Eiseley, "The Bird and the Machine")</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(Making rice in the country)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
March 7, 2020	Last date to complete this week's regular assignments.	



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## WEEK 8 PERSPECTIVE: STRATIFIED REALITY



“Red Rose” by Bakufu Ohno (1949)  
ukiyo-e.org

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*“The various sciences themselves, ranging from physics and chemistry to the humanities and theology, can be regarded as constituting a hierarchical structure of levels of inquiry which are open upwards into wider and more comprehensive systems of knowledge but are not reducible downwards.”*

– Thomas F. Torrance, *Space, Time and Resurrection*, p. 188

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**Topics:** *Levels of reality. The Resurrection and nature.*

### Outline:

1. Introduction
2. What is the stratification of reality?
3. Michael Polanyi
4. T. F. Torrance
5. Stratified Reality and the Resurrection
6. Conclusion

### Steps:

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.

2. Watch the Week 8 Perspective video presentation, “Stratified Reality,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/391125923> (48 mins.)
  2. Slides/script (PDF):  
<http://kerrymagruder.com/TH504/TH504-Week8a-Stratified-Reality.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 8 READINGS

Download the Seminar Notes for this week's readings (if available), and refer to them while reading.

Reading the following *required* reading assignments:

- Conduct a literary reading of *Out of the Silent Planet*, pp. 85-160 (complete the novel). With the audiobook version, you can listen from ch. 14 to the end in only 2 hours and 48 minutes. The entire audiobook is 5 hours, 31 minutes for all 160 pages.

Enjoy the following optional reading:

- C. S. Lewis, *Miracles*, ch. 8, "Miracle and the Laws of Nature"
- Loren Eiseley, "The Bird and the Machine," *The Immense Journey*

Now refer to Appendix N: Regular Weekly Assignments and Appendix P: The Weekly Reading Notebook Assignment for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: Making rice in the country (10:26 mins):*  
Li Ziqi, "Full Moon, Fragrance of Ripe Rice, Farmers Busy Harvesting Crops," <https://youtu.be/xSDMTle90AY>

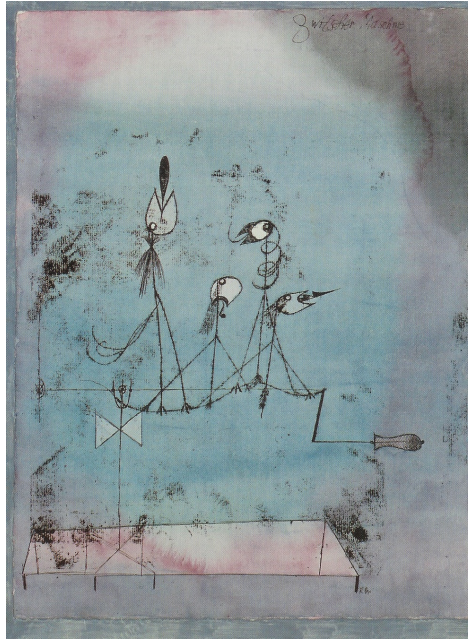
Granted that this is an idealized portrait, how might it encourage us to imagine a holistic lifestyle, living in harmony with creation?

Background, if you want more:

- Background on Li Ziqi: <https://liziqishop.com/pages/li-ziqis-biography-story-vlogger-who-is-she-age-wiki-where-live-how-old>
- Her channel: [https://www.youtube.com/channel/UCoC47do520os\\_4DBMEFGg4A](https://www.youtube.com/channel/UCoC47do520os_4DBMEFGg4A)
- [https://en.wikipedia.org/wiki/Li\\_Ziqi\\_\(blogger\)](https://en.wikipedia.org/wiki/Li_Ziqi_(blogger))

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## WEEK 8 APPLICATION: REALITY IN MANY DIMENSIONS



“The Twittering Machine,” Paul Klee  
Museum of Modern Art, New York

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*“Like a flicker of light [the kestrel] had vanished with my eyes full on him, but without actually seeing even a premonitory wing beat. He was gone straight into that towering emptiness of light and crystal that my eyes could scarcely bear to penetrate. For another long moment there was silence. I could not see him. The light was too intense. Then from far up somewhere a cry came ringing down. I was young then and had seen little of the world, but when I heard that cry my heart turned over. It was not the cry of the hawk I had captured; for, by shifting my position against the sun, I was now seeing further up. Straight out of the sun’s eye, where she must have been soaring restlessly above us for untold hours, hurtled his mate. And from far up, ringing from peak to peak of the summits over us, came a cry of such unutterable and ecstatic joy that it sounds down across the years and tingles among the cups on my quiet breakfast table.*

*I am older now, and sleep less, and have seen most of what there is to see and am not very much impressed anymore, I suppose, by anything. ‘What Next in the Attributes of Machines?’ my morning headline runs.... All over the city the cogs in the hard, bright mechanisms have begun to turn. Figures move through computers, names are spelled out, a thoughtful machine selects the fingerprints of a wanted criminal from an array of thousands. In the laboratory an electronic mouse runs swiftly through a maze toward the cheese it can neither taste nor enjoy. On the second run it does better than a living mouse.*

*On the other hand... Ah, my mind takes up, on the other hand the machine does not bleed, ache, hang for hours in the empty sky in a torment of hope to learn the fate of another machine, nor does it cry out with joy nor dance in the air with the fierce passion of a bird. Far off, over a distance greater than space, that remote cry from the heart of heaven makes a faint buzzing among my breakfast dishes and passes on and away.”*

*– Loren Eiseley, “The Bird and the Machine” (in The Immense Journey)*

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**Topics:** *Nothing buttery (Reductionism). Scientism. Miracles. Materialism. Idolatry.*

**Outline:**

1. Introduction
2. The Multi-Level Rose
3. Science and Miracles (Scientism)
4. Science and the Imagination (Reductionism)
5. Science and History
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 8 Application video presentation, “Reality in Many Dimensions,” download the handout, and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/392473573> (64 mins)
  2. Slides/Script (PDF):  
<http://kerrymagruder.com/TH504/TH504-Week8b-Many-Dimensions.pdf>
  3. Stratification of Reality handout (use to follow along in the presentation):  
<http://kerrymagruder.com/TH504/TH504-Week8b-Many-Dimensions-handout.pdf>  
Download this handout and follow along as it is explained in the presentation.
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

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## WEEK 8: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 8 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 8: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 8: LAST WORDS

Refer to [Appendix R](#) for instructions.

## Week 9: Dualism

Assignment	Checklist	Description
Feb 24	This week's assignments open	
<b>Perspective</b> Monday-Tues March 2 11pm	<input type="checkbox"/> Seminar video (2 hrs) <input type="checkbox"/> Additional Reading (1.5 hrs) <input type="checkbox"/> Forum (1.5 hrs) <input type="checkbox"/> Gradebook Declaration	<b>Dualism</b> <ul style="list-style-type: none"> <li>• STR 43-45, ch 8c: 179-193.</li> <li>• (Optional: C. S. Lewis, "Funeral of a Great Myth," <i>Christian Reflections</i>, pp. 82-93. TFT, "Incarnation and Atonement in Light of Modern Scientific Rejection of Dualism.")</li> </ul>
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs) <input type="checkbox"/> Additional Reading (1.5 hrs) <input type="checkbox"/> Forum (1.5 hrs) <input type="checkbox"/> Gradebook Declaration	<b>Dilemmas of Design</b> <ul style="list-style-type: none"> <li>•</li> </ul>
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr) <input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr) <input type="checkbox"/> Doxological Science <input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	   (Nature in the City)
Mar 14, 2020	Last date to complete this week's regular assignments.	



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## WEEK 9 PERSPECTIVE: DUALISM



"Leonardo's Dilemma" by Michael Barfield  
Rivendell Gallery

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*"Newton was not the first of the age of reason. He was the last of the magicians, the last of the Babylonians and Sumerians, the last great mind which looked out on the visible and intellectual world with the same eyes as those who began to build our intellectual inheritance rather less than 10,000 years ago.... he looked on the whole universe and all that is in it as a riddle, as a secret which could be read by applying pure thought to certain evidence, certain mystic clues which God had laid about the world to allow a sort of philosopher's treasure hunt to the esoteric brotherhood. He believed that these clues were to be found partly in the evidence of the heavens and in the constitution of elements..., but also partly in certain papers and traditions handed down by the brethren in an unbroken chain back to the original cryptic revelation in Babylonia. He regarded the universe as a cryptogram set by the Almighty."*  
– John Maynard Keynes

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**Topics:** Dualisms ancient and modern. Newton as theologian. Faith vs. Reason, Kant to 20th cent; Positivism; Empiricism vs. Metaphysics; Natural vs. Supernatural.

**Outline:**

1. Introduction
2. Dualism – Overview
3. Dualism before Newton
4. Newton as Dualistic Theologian
5. Dualism after Newton
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Week 9 Perspective video presentation, “Dualism: Cultural Splits,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/394074773> (1 hr, 19 mins)
  2. Slides/Script PDF: <http://kerrymagruder.com/TH504/TH504-Week9a-Dualism.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 9 READINGS

Download the Seminar Notes for this week’s readings (if available), and refer to them while reading.

Conduct a close reading of the following *required* reading assignments:

- STR 43-45, ch 8c: 179-193.
  - In ch. 1, “The Biblical Concept of Resurrection,” on p. 43, start with “But if we do try to understand the Resurrection of Jesus Christ on its own native ground...” Then read to the end of ch. 1 on p. 45.
  - Start with “What are we to make of such a conception of the resurrection...” on p. 179 in ch. 8, “The Lord of Space and Time.” Read up through the end of the chapter.

Enjoy the following *optional* reading:

- C. S. Lewis, “De Futilitate,” *Christian Reflections*, pp. 57-71 (cf. “Funeral of a Great Myth,” pp. 82-93).
- T. F. Torrance, “Incarnation and Atonement in Light of Modern Scientific Rejection of Dualism,” in *Preaching Christ Today* (posted as optional reading for Week 3).

Now refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: “Nature in the City”*

Browse either or both of the two links below:

- Au Sable Institute. “Today, if we are to practice creation care, our actions should not be confined to “natural environments” but also occur where people are increasingly residing. The care of creation must happen in the city.” <https://www.ausable.org/au-sable-blog/2019/12/20/au-sable-launches-new-campus-in-chicago>
  - Richard Louv, *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*: <https://kerrysloft.com/education/last-child-in-the-woods/>
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## WEEK 9 APPLICATION: DILEMMAS OF DESIGN



“The Violin Maker,” by Michael Barfield  
Listening House Studio

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*“Pagan cultures encountered their gods and goddesses in nature. The gods were to nature what the soul is to the body: they animated it and gave it its awesomeness. The Hebrews encountered their God in history. Yahweh disclosed himself in actions that were prophetically interpreted and that marked the Israelites as a people covenantally distinguished as his own. They did not expect encounters with God in nature, as did the pagans. In fact, it may be the case that in the ‘nature’ Psalms, such as Psalm 8, we can hear a voice mocking the Egyptians and Mesopotamians for their confusion of the supernatural and the natural. For the psalmist, nature reflects the greatness of God but it neither discloses his saving intentions nor mediates his direct presence. Yahweh’s designs were defined by his acts in history as prophetically interpreted, not his acts in nature or his immanent presence in human nature.” – David Wells, No Place for Truth*

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### Outline:

1. Introduction
2. Argument from Design
3. From Deism to Atheism
4. Evolutionism and Progress
5. Intelligent Design
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 9 Application video presentation, “Dilemmas of Design,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/395064575> (1 hr, 24 mins)
  2. Slides/script PDF: <http://kerrymagruder.com/TH504/TH504-Week9b-Design.pdf>
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

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## WEEK 9: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 9 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 9: CONVERSATION ASSIGNMENT

Refer to [Appendix S](#) for instructions.

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## WEEK 9: LAST WORDS

Refer to [Appendix R](#) for instructions.

## Week 10: Natural Theology

Assignment	Checklist	Description
March 2	This week’s assignments open	
<b>Perspective</b> Monday-Tues March 9 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Natural Theology</b> <ul style="list-style-type: none"><li>• STR “Preface,” ix-xiii.</li><li>• TFT, “Natural Theology in the Thought of Karl Barth”</li><li>• (Annie Dillard excerpt)</li></ul> <hr/> <i>Cross-references</i> <i>*Incarnation, 235-256.</i>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>Evolution</b> <ul style="list-style-type: none"><li>• Darwin exhibit brochure</li><li>• Dialogue on evolution</li></ul>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update “Love in the Cosmos” with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(BioLogos)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
March 21	Last date to complete this week’s regular assignments.	

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## WEEK 10 PERSPECTIVE: NATURAL THEOLOGY



"Child's Scarlet Christ," by Michael Barfield  
Rivendell Gallery

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*"There is no point in playing down the staggering significance of the incarnation and resurrection. God the Creator of the universe, transcendent over all time and space, has himself become a creature within time and space, the man Jesus Christ, and precisely as such, 'within the measures and limits' of our human historical existence, he is at work in immeasurable love defeating the forces of darkness, irrationality and evil within creaturely being where they are despotically entrenched."*

– Thomas F. Torrance, *Space, Time and Resurrection*, p. 21

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*"A proper natural theology should be natural both to theological science and to natural science. A natural theology in this full sense will have its proper place in the dialogue between theological science and natural science within their common sharing of the rational structures of space and time... within their common sharing in the basic conceptions of the unitary rationality of the universe, its contingent intelligibility and contingent freedom—which derive from a Christian understanding of the relation of God to the universe."* – Thomas F. Torrance, *Ground and Grammar*, p. 94

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**Topics:** No creation without Christ. Trinitarian natural theology is Integration rather than apologetics. God is not the conclusion of a proof, demonstrated by logic or nature.



**Outline:**

1. Introduction
2. Episodes of Natural Theology
3. Purposes of Natural Theology
4. *Nein!* Barth vs. Brunner
5. Trinitarian Natural Theology
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.
2. Watch the Week 10 Perspective video presentation, “Natural Theology,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/396379754> (68 mins)
  2. Slides/Script PDF: <http://kerrymagruder.com/TH504/TH504-Week10a-Natural-Theology.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 10 READINGS

Download the Seminar Notes for this week's readings (if available), and refer to them while reading.

Conduct a close reading of the following *required* reading assignments:

- STR "Preface," ix-xiii.
  - Read the entire preface.
- GGT vii-viii, ix-xii, ch. 4: 75-109.
  - Read the entire preface to the new edition, and the original preface. Then read the entirety of ch. 4, "The Transformation of Natural Theology."

Enjoy the following *optional* readings:

- Annie Dillard, *Pilgrim at Tinker Creek*, pp. 282-289.

This brief excerpt from Annie Dillard will give you a flavor of Dillard's beautiful prose and acute observation of nature, which is animated throughout by questions of religious faith plagued by the ambiguity of nature as a pointer to the character of God. No wonder it won a Pulitzer Prize. One might say Dillard is one of the most influential writers of natural theology in recent decades. If you haven't encountered Dillard before, here's an ideal place to begin. Reading Dillard will show both the need to engage a theology of creation as well as the inadequacy of nature as a starting point for such inquiry.
- Thomas F. Torrance, "Natural theology in the Thought of Karl Barth," in *Karl Barth: Biblical and Evangelical Theologian* (Edinburgh: T&T Clark, 1990), 136-159 <https://tftorrance.org/1990-517f>.
- Darwin's works - short video: <https://www.gcs.edu/mod/url/view.php?id=5064>
- Darwin exhibit brochure: Charles Darwin, intro to his life and works. <http://lynx-open-ed.org/OERs/Darwin-Exhibition-Brochure.pdf>

This is a booklet I wrote back in 2009, originally for a joint exhibition with OU's natural history museum. A brief survey of the breadth and beauty of Darwin's varied work undermines many caricatures about who he was and what he was trying to do.
- Kerry Magruder, "The American Evangelical Reception of Darwin: A Dialogue between G. F. Wright and F. Gregory."

Imagine that it is 1875. You are in the study of a seminary professor, George Frederick Wright, who is also a leading American geologist. Another seminary professor, a teacher of Greek, Frederic Gardiner, joins him for light conversation on evolution. They will each prepare articles for *Bibliotheca Sacra* based on this conversation. *Note*: This is a fictional dialogue I wrote, but it's intended to give you a

sense of their actual views at this time, which were representative of the readers of the leading evangelical periodical of the time, *Bibliotheca Sacra*, published by Princeton Seminary.

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*This week's Seminar Notes contain cross-references to Incarnation, 235-256.*

Now refer to Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix P: The Weekly Reading Notebook Assignment](#) for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: “BioLogos”*

- Browse the BioLogos website. Check out their [Resources section](#), the [BioLogos Basics](#) videos, and the [Common Questions](#) videos. If you listen to podcasts, consider subscribing to their [Language of God podcast](#).
- “Many people today, both secular and Christian, want us to believe that science and religion cannot live together. Not only is this untrue, but we believe that a thoughtful dialogue between science and faith is essential for engaging the hearts and minds of individuals today. BioLogos provides an important first step towards that end.” Tim Keller, Pastor & Author.

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## WEEK 10 APPLICATION: EVOLUTION



"Chi Rho" page, Book of Kells (c. 800)  
Library of Trinity College, Dublin

*Evangelicals hold various positions on origins ranging from Young Earth Creation, to Intelligent Design, to Old Earth Progressive Creation, to Evolutionary Creation. No matter what your perspective, my goal in this course is not to change where you stand. Rather, my goal is to help you see how the Trinitarian theological perspectives we've focused on all semester may be brought to bear on a complex and difficult issue. To do that, I'm going to share what I believe. Imagine that we are having a conversation instead of a lecture. Imagine that you have just asked me why I not only accept evolution, but am theologically attracted to it as a Trinitarian evangelical Christian. I will share with you the big picture of how all these issues came together for me. There are some valuable historical lessons that gave me important context. Indeed, we'll start with an introduction to Darwin that will be different from what you've heard before, before moving on to theological perspectives. Yet keep in mind that my ultimate goal in sharing my own conclusions is to prompt you to reflect for yourself on how the theological perspectives we have been developing in this course bear upon these questions.*

**Outline:**

1. Introduction
2. Charles Darwin
3. Young Earth Creation
4. Evolutionary Creation
5. Queries and Theses
6. Conclusion

**Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 10 Application video presentation, “Evolution,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/402025309> (1 hr, 45 mins)
  2. Slides/Script PDF:  
<http://kerrymagruder.com/TH504/TH504-Week10b-Evolution.pdf>
3. Complete your reflection and post comments on the Application Forum.
4. Make your Application Gradebook Declaration.

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## WEEK 10: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 10 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 10: WEBSITE TASK #3

This week, aim to complete Website Task #3.  
Refer to [Appendix T](#) for instructions.

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## WEEK 10: LAST WORDS

Refer to [Appendix R](#) for instructions.

## Week 11: The Priest of Creation

Assignment	Checklist	Description
March 9	This week's assignments open	
<b>Perspective</b> Monday-Tues March 16 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>The Priest of Creation</b> • C. S. Lewis, <i>Abolition of Man</i> , ch. 3, pp. 67-91
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Application</b> Thursday 11pm	<input type="checkbox"/> Seminar video (2 hrs)	<b>New Creation</b> • STR ch 4c: 102-105, ch 7b: 150-155, ch 8b: 174-177. ----- <i>Cross-references:</i> <i>*Incarnation, or Atonement (optional).</i>
	<input type="checkbox"/> Additional Reading (1.5 hrs)	
	<input type="checkbox"/> Forum (1.5 hrs)	
	<input type="checkbox"/> Gradebook Declaration	
<b>Misc.</b> Friday 11pm	<input type="checkbox"/> Website Task OR Conversation with Gradebook Declaration (1 hr)	
	<input type="checkbox"/> Revise/update "Love in the Cosmos" with Gradebook Decl. (1 hr)	
	<input type="checkbox"/> Doxological Science	(World of Water)
	<input type="checkbox"/> Last Words with Gradebook Declaration (1 hr)	
Mar 28, 2020	Last date to complete this week's regular assignments.	



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## WEEK 11 PERSPECTIVE: THE PRIEST OF CREATION



“Now a System so Advanced” by Michael Barfield  
Rivendell Gallery

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*“It is the magician’s bargain: give up our soul, get power in return. But once our souls, that is, ourselves, have been given up, the power thus conferred will not belong to us. We shall in fact be the slaves and puppets of that to which we have given our souls.” – C. S. Lewis, The Abolition of Man*

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**Topics:** Technology harnessed to restore what was lost in the fall vs. power over others (magus). Lewis: Christianity the antidote to domination of nature and humans by science. Lynn White vs. Lewis.

### Outline:

1. Introduction
2. Priest of Creation
3. Technology and Magic
4. The Church and Ecology
5. Image of God
6. Conclusion

### Steps:

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix O: The Weekly Perspective Assignment](#) for instructions on the Perspective Assignment.



2. Watch the Week 11 Perspective video presentation, “The Priest of Creation,” and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/398001456> (58 mins)
  2. Slides/Script PDF: <http://kerrymagruder.com/TH504/TH504-Week11a-Priest.pdf>
3. Complete your reflection and post comments on the Perspective Forum.
4. Make your Perspective Gradebook Declaration.

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## WEEK 11 READINGS

Download the Seminar Notes for this week's readings (if available), and refer to them while reading.

Conduct a close reading of the following *required* reading assignments, most of which pertain to the future of the universe in light of redemption:

- STR ch 4c: 102-105, ch 7b: 150-155, ch 8b: 174-177.
  - Read the last section of chapter 4, "The Nature of the Resurrection Event," beginning with "But what about the individual..." to the end of the chapter.
  - Read in chapter 7, "The Ascension and Parousia," from section 3, "Eschatological Relation to the Ascended and Advent Jesus Christ" on p. 150 through the bottom of page 155, which concludes: "...the final cosmic range of God's redeeming purpose."
  - Read an excerpt in the middle of ch. 8, "The Lord of Space and Time," beginning on p. 174 with: "In view of this we have some reason to speak..." Read up through the paragraph on p. 177 which concludes: "... its inherent intelligibility, in the risen Lord himself."
  - **Optional: Read the entirety of any of these chapters in STR in preparation for Easter and Ascension Sunday.**
- **Optional: C. S. Lewis, *Abolition of Man*, ch. 3, pp. 67-91.**

Now refer to Appendix N: Regular Weekly Assignments and Appendix P: The Weekly Reading Notebook Assignment for instructions on the Reading Notebook Assignment. Complete your Notebook Entry post on the Notebook Forum and your Notebook Gradebook Declaration.

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*Optional — Doxological Science Activity: "World of Water"*

- **How much water would the Earth hold if it were the size of a globe? See: <https://kerrysloft.com/education/water-cycle-globe-model/>**
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## WEEK 11 APPLICATION: THE NEW CREATION



“Chorus from the Rock” by Michael Barfield  
Rivendell Gallery

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*“Such a resurrection of the incarnate Word of God within the creation of time and space which came into being through him is inevitably an event of cosmic and unbelievable magnitude. So far as the temporal dimension of creation is concerned, it means that the transformation of all things at the end of time is already impinging upon history, and indeed that the consummation of history has already been inaugurated. And so far as the spatial dimension of creation is concerned, it means that the new creation has already set in, so that all things visible and invisible are even now in the grip of the final recreation of the universe. The resurrection of Jesus heralds an entirely new age in which a universal resurrection or transformation of heaven and earth will take place, or rather has already begun to take place, for with the resurrection of Jesus that new world has already broken into the midst of the old.”*

– Thomas F. Torrance, *Space, Time and Resurrection*, p. 31

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*“He who was made flesh is the Creator Logos by whom all things were made and in whom all things are upheld. When he became incarnate, and divine and human natures were united in his*

*one person, his humanity was brought into an ontological relation with all creation. So far as our humanity is concerned that means that all men are upheld, whether they know it or not, in their humanity by Jesus Christ the true and proper man, upheld by the fulfilment and establishment of true humanity in him, but also through his work in the cross and resurrection in which he overcame the degenerating forces of evil and raised up our human nature out of death and perdition. But the range of Christ's mighty acts in incarnation, reconciliation and resurrection apply to the whole universe of things, visible and invisible. The whole of creation falls within the range of his Lordship, as he works out his purpose by bringing redemption together with creation, and actualizing the holy will of the Father in everything. Eschatology has here a teleological relation to the whole realm of created existence, and leads into the doctrine of 'the new heaven and the new earth'. God does not abandon his creation when he has saved man, for all creation, together with man, will be renewed when Christ comes again. Since he is the first-born of the new creation, the head in whom all things, visible and invisible, are reconciled and gathered up, the resurrection of Christ in body becomes the pledge that the whole physical universe will be renewed, for in a fundamental sense it has already been resurrected in Christ."*  
– Thomas F. Torrance, *Space, Time and Resurrection*, pp. 154-155

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**Topics:** *Already and not yet... Union with Christ in the New Creation entails re-creation from within space & time, not creatio ex nihilo. Romans 8 and humanity as the Priest of Creation, mediating the freedom of the children of God to all creation.*

### **Outline:**

The outline below is a future goal; this lecture as currently uploaded is abbreviated from what was originally planned.

- Introduction
- First fruits of the New Creation
- The Resurrection and Medicine
- The Resurrection and Animals
- The Resurrection and the Cosmos
- Conclusion

### **Steps:**

1. Refer to [Appendix N: Regular Weekly Assignments](#) and [Appendix Q: The Weekly Application Assignment](#) for instructions on the Application Assignment.
2. Watch the Week 11 Application video presentation, "The New Creation," and/or download the PDF with slides and script.
  1. Video: <https://vimeo.com/398069581> (35 mins)
  2. Slides/Script PDF: <http://kerrymagruder.com/TH504/TH504-Week11b-New.pdf>
3. Complete your reflection and post comments on the Application Forum.

4. Make your Application Gradebook Declaration.

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## WEEK 11: LOVE AND THE COSMOS

Revise your “Love and the Cosmos” essay from last week to incorporate any insights gained from this week’s material. Post your revised essay in the “Week 11 Love and the Cosmos” forum. Refer to [Appendix U](#) for details.

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## WEEK 11: WEBSITE TASK #4

This week, aim to complete Website Task #4.  
Refer to [Appendix T](#) for instructions.

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## WEEK 11: LAST WORDS

Refer to [Appendix R](#) for instructions.

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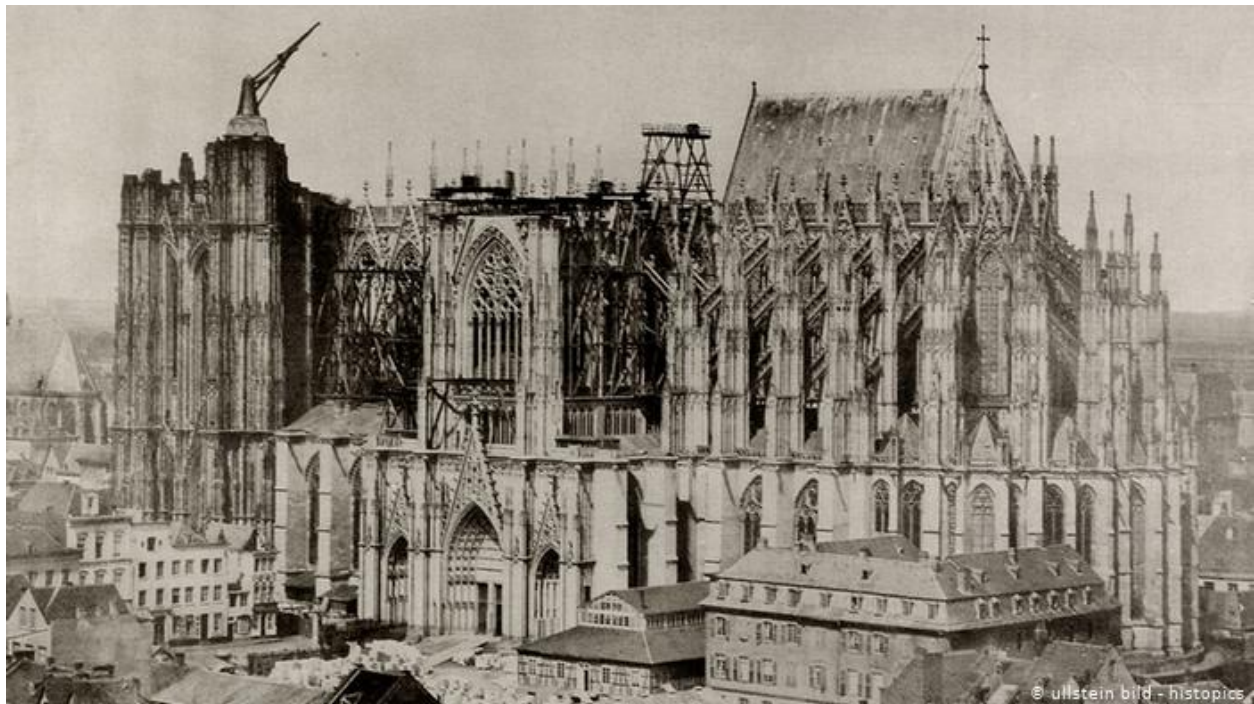
## Epilogue

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*“Finally, it was stated at the outset, that this system would not be here, and at once, perfected. You cannot but plainly see that I have kept my word. But I now leave my cetological System standing thus unfinished, even as the great Cathedral of Cologne was left, with the crane still standing upon the top of the uncompleted tower. For small erections may be finished by their first architects; grand ones, true ones, ever leave the copestone to posterity. God keep me from ever completing anything. This whole book is but a draught—nay, the draught of a draught. Oh, Time, Strength, Cash, and Patience.”*

*– Herman Melville, Moby Dick, ch. XXXII*

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The Köln (= Cologne) Cathedral in 1853.  
The crane was demolished in 1868 after 800 years of construction.  
Credit: [DW](#).