

SCIENCE, MEDICINE, AND RELIGION
History of Science/Medical History & Bioethics 331
Spring 2011
11:00-12:15 Monday & Wednesday
1010 Medical Sciences Center

Instructor:

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Course description:

This course explores the complex and often perplexing historical issues raised by three overlapping arenas of human expression: science, medicine, and religion. We begin with asking some broad questions about the place of scientific and medical inquiry within a variety of religious contexts, including Judaism, Christianity, and Islam. We then focus on debates specific to particular domains of scientific and medical inquiry, ranging from the religious implications of Copernicanism to natural theology, evolutionary theory, and the efficacy of intercessory prayer.

Course requirements:

Classes will consist primarily of discussions. To this end, students must read the assigned texts and come to every class prepared to participate in discussion. Undergraduates will write a short research paper (of no more than 10 typed double-spaced pages) based largely on primary sources; graduate students may have up to 20 pages. All paper topics must be approved in advance. There will also be a final examination.

Textbooks:

David C. Lindberg and Ronald L. Numbers, eds., *God and Nature: Historical Essays on the Encounter between Christianity and Science* (Berkeley and Los Angeles: University of California Press, 1986)

David C. Lindberg and Ronald L. Numbers, eds., *When Science and Christianity Meet* (University of Chicago Press, 2003).

Ronald L. Numbers, ed., *Galileo Goes to Jail and Other Myths about Science and Religion* (Harvard University Press, 2009).

John Hedley Brooke and Ronald L. Numbers, eds., *Science and Religion around the World* (Oxford University Press, 2011).

For additional readings, go to "My UW."

SCHEDULE

January 19: Introduction: Histories and Boundaries

January 24: Early Christianity

January 26: Medieval Christianity

January 31: Early Judaism and Islam

February 2: Copernicanism and the Bible

February 7: The Galileo Affair

February 9: The Scientific Revolution

February 14: The Mechanistic Universe

February 16: Protestants and Catholics

February 21: Religious and Scientific Missions

February 23: The Enlightenment

February 28: Natural History and Natural Theology

March 2: Naturalizing Nature

March 7: Genesis and Geology

March 9: The Origin and Antiquity of Humans

Spring Break

March 21: Charles Darwin and Organic Evolution

March 23: Religious Responses to Darwinism

March 28: Modern Judaism and Islam

March 30: Science and Religion in Modern Asia and Africa:

April 6: Plagues and Miracles

- April 11: Divine Healing**
- April 13: Psychology and Sex**
- April 18: The Antievolution Controversy in the 1920s**
- April 20: Scientific Creationism**
- April 25: Intelligent Design**
- April 27: God and Modern Physics**
- May 2: Science and Secularization**
- May 4: Contemporary Issues**

January 19: Introduction: Histories and Boundaries

Required readings:

Andrew Dickson White, "The Battle-Fields of Science," *New York Daily Tribune*, December 18, 1869, p. 4.

Ronald L. Numbers, "Introduction," *Galileo Goes to Jail*, pp. 1-7.

Harrison, Peter. "'Science' and 'Religion': Constructing the Boundaries," *Journal of Religion* 86 (2006): 81-106.

James Moore, "Religion and Science," in *The Cambridge History of Science*, vol. 6: The Modern Biological and Earth Sciences, ed. Peter J. Bowler and John V. Pickstone (Cambridge: Cambridge University Press, 2009), pp. 541-62.

Related readings (optional):

David C. Lindberg and Ronald L. Numbers, eds., *God and Nature: Historical Essays on the Encounter between Christianity and Science* (Berkeley and Los Angeles: University of California Press, 1986).

John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991).

Gary B. Ferngren, ed., *The History of Science and Religion in the Western Tradition: An Encyclopedia* (New York: Garland, 2000).

James R. Moore, "Historians and Historiography," in Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900* (Cambridge: Cambridge University Press, 1979), pp. 17-122.

Richard Olson, *Science Deified and Science Defied: The Historical Significance of Science in Western Culture*, 2 vols. (Berkeley and Los Angeles: University of California Press, 1982, 1990).

Thomas Dixon, Geoffrey Cantor, and Stephen Pumfrey, eds. *Science and Religion: New Historical Perspectives* (Cambridge: Cambridge University Press, 2010).

David C. Lindberg and Ronald L. Numbers, "Beyond War and Peace: A Reappraisal of the Encounter between Christianity and Science," *Church History* 55 (1986): 338-54.

Ronald L. Numbers, "Aggressors, Victims, and Peacemakers: Historical Actors in the Drama of Science and Religion," in *The Science and Religion Debate: Why Does It*

Continue?, ed. Harold W. Attridge (New Haven: Yale University Press, 2009), 15-53, 180-92.

Ronald L. Numbers, *Science and Christianity in Pulpit and Pew* (New York: Oxford University Press, 2007).

Ronald L. Numbers and Darrel W. Amundsen, eds. *Caring and Curing: Health and Medicine in the Western Religious Traditions* (New York: Macmillan, 1986).

Thomas F. Gieryn, "Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists," *American Sociological Review* 48 (1983): 781-95.

Martin J. S. Rudwick, "Senses of the Natural World and Senses of God: Another Look at the Historical Relation of Science and Religion," in *The Sciences and Theology in the Twentieth Century*, ed. A. R. Peacocke (Notre Dame, IN: University of Notre Dame Press, 1981), pp. 241-61.

Jon H. Roberts, "Science and Religion," in *Wrestling with Nature: From Omens to Science*, ed. Peter Harrison, Ronald L. Numbers, and Michael H. Shank (Chicago: University of Chicago Press, 2011), pp. 253-79.

David N. Livingston, D. G. Hart, and Mark A. Noll, eds. *Evangelicals and Science in Historical Perspective* (New York: Oxford University Press, 1999).

January 24: Early Christianity

Required readings:

David C. Lindberg, "Science and the Early Church," in *God and Nature*, pp. 19-48.

Peter Harrison and David C. Lindberg, "Early Christianity," in *Science and Religion around the World*, pp. 67-71

David C. Lindberg, "Myth 1. That the Rise of Christianity Was Responsible for the Demise of Ancient Science," *Galileo Goes to Jail*, pp. 8-18.

Gary B. Ferngren, "Early Christianity as a Religion of Healing," *Bulletin of the History of Medicine* 66 (1992): 1-15.

Related readings:

David C. Lindberg, *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450*, 2nd ed. (Chicago: University of Chicago Press, 2008).

Gary B. Ferngren, *Medicine and Health Care in Early Christianity* (Baltimore: Johns Hopkins University Press, 2009).

January 26: Medieval Christianity

Required readings:

Peter Harrison and David C. Lindberg, "Early Christianity," in *Science and Religion around the World*, pp. 71-77.

Edward Grant, "Science and Theology in the Middle Ages," in *God and Nature*, pp.49-75.

David C. Lindberg, "The Medieval Church Encounters the Classical Tradition: Saint Augustin, Roger Bacon, and the Handmaiden Metaphor," in *When Science and Christianity Meet*, pp. 7-32.

Michael H. Shank, "Myth 2. That the Medieval Christian Church Suppressed the Growth of Science," *Galileo Goes to Jail*, pp. 19-27.

Lesley B. Cormack, "Myth 3. That Medieval Christians Taught That the Earth Was Flat," *Galileo Goes to Jail*, pp. 28-34.

Katharine Park, "Myth 5. That the Medieval Church Prohibited Human Dissection," *Galileo Goes to Jail*, pp. 43-49.

Related readings:

David C. Lindberg, *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450*, 2 nd ed. (Chicago: University of Chicago Press, 2008).

Edward Grant, *God and Reason in the Middle Ages* (Cambridge: Cambridge University Press, 2001).

Stephen C. McCluskey, *Astronomies and Cultures in Early Medieval Europe* (Cambridge: Cambridge University Press, 1998).

Stephen Gaukroger, *The Emergence of a Scientific Culture: Science and the Shaping of Modernity, 1210-1685* (Oxford: Oxford University Press, 2006).

Darrel W. Amundsen. *Medicine, Society, and Faith in the Ancient and Medieval Worlds* (Baltimore: Johns Hopkins University Press, 1996).

Timothy S. Miller, *The Birth of the Hospital in the Byzantine Empire* (Baltimore: Johns Hopkins University Press, 1985).

Andrew T. Crislip, *From Monastery to Hospital: Christian Monasticism and the Transformation of Health Care in Late Antiquity* (Ann Arbor: University of Michigan Press, 2005).

January 31: Early Judaism and Islam

Required readings:

Noah Efron, "Early Judaism," in *Science and Religion around the World*, pp. 29-43.

Ahmad S. Dallal, "Early Islam," in *Science and Religion around the World*, pp. 120-47.

Syed Nomanul Haq "Myth 4. That Medieval Islamic Culture Was Inhospitable to Science," in *Galileo Goes to Jail*, pp. 35-42.

Related readings:

Noah J. Efron, *Judaism and Science: A Historical Introduction* (Westport, CT: Greenwood Press, 2007).

Menachem Fisch, *Rational Rabbis: Science and Talmudic Culture* (Bloomington: Indiana University Press, 1997).

Gad Freudenthal, *Science in the Medieval Hebrew and Arabic Traditions* (Aldershot, U.K.: Ashgate, 2004).

Samuel Kottke et al., *From Athens to Jerusalem: Medicine in Hellenized Jewish Lore and in Early Christian Literature* (Rotterdam: Erasmus Publishing, 2000).

Y. Tzvi Langermann, *The Jews and the Sciences in the Middle Ages* (Aldershot, U.K.: Ashgate, 1999).

David B. Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995).

Joseph Shatzmiller, *Jews, Medicine, and Medieval Society* (Berkeley and Los Angeles: University of California Press, 1994).

Ahmad S. Dallal, *Islam, Science, and the Challenge of History* (New Haven: Yale University Press, 2010).

Dimitri Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society (2nd–4th/8th–10th centuries)* (London: Routledge, 1998).

Jan P. Hogendijk and Abdelhamid I. Sabra, eds., *The Enterprise of Science in Islam: New Perspectives* (Cambridge, MA: MIT Press, 2003).

Seyyed Hossein Nasr, *Science and Civilization in Islam* (Cambridge, MA: Harvard University Press, 1968).

Peter Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine* (Washington, DC: Georgetown University Press, 2007).

A. I. Sabra, "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam: A Preliminary Statement," *History of Science* 25 (1987): 223–43.

George Saliba, *Islamic Science and the Making of the European Renaissance* (Cambridge, MA: MIT Press, 2007).

Howard R. Turner, *Science in Medieval Islam* (Austin: University of Texas Press, 1997).

February 2: Copernicanism and the Bible

Required readings:

Robert S. Westman, "The Copernicans and the Churches," in *God and Nature*, pp. 76–113.

Michel-Pierre Lerner, "The Heliocentric 'Heresy': From Suspicion to Condemnation," in *The Church and Galileo*, ed, Ernan McMullin (Notre Dame, IN: University of Notre Dame Press, 2005), pp. 11–37.

Dennis R. Danielson, "Myth 6. That Copernicanism Demoted Humans from the Center of the Cosmos," in *Galileo Goes to Jail*, pp. 50–58.

Jole Shackelford, "Myth 7. That Giordano Bruno Was the First Martyr of Modern Science," in *Galileo Goes to Jail*, pp. 59–67.

Related readings:

Robert S. Westman, "The Melanchthon Circle, Rheticus, and the Wittenberg Interpretation of the Copernican Theory," *Isis* 66 (1975): 165–93.

Robert S. Westman, *The Copernican Question: Prognostication, Scepticism and Celestial Order* (Berkeley and Los Angeles: University of California Press, 2011).

Irving A. Kelter, "The Refusal to Accommodate: Jesuit Exegetes and the Copernican System," in *The Church and Galileo*, ed, Ernan McMullin (Notre Dame, IN: University of Notre Dame Press, 2005), pp. 38–53.

James M. Lattis, *Between Copernicus and Galileo: Christoph Clavius and the Collapse of Ptolemaic Cosmology* (Chicago: University of Chicago Press, 1994).

Hilary Gatti, *Giordano Bruno and Renaissance Science* (Ithaca, NY: Cornell University Press, 2002).

February 7: The Galileo Affair

Required readings:

David C. Lindberg, "Galileo, the Church, and the Cosmos," in *When Science and Christianity Meet*, pp. 33-60.

William R. Shea, "Galileo and the Church," in *God and Nature*, pp. 114-35.

Maurice A. Finocchiaro, "Myth 8. That Galileo Was Imprisoned and Tortured for Advocating Copernicanism," in *Galileo Goes to Jail*, pp. 68-78.

Related readings:

John Heilbron, *Galileo* (New York: Oxford University Press, 2010).

Ernan McMullin, ed., *The Church and Galileo* (Notre Dame, IN: University of Notre Dame Press, 2005). Includes Michael H. Shank, "Setting the Stage: Galileo in Tuscany, the Veneto, and Rome," pp. 57-87.

Anibale Fantoli, *Galileo: For Copernicanism and for the Church*, trans. George V. Coyne, 2nd ed. (Vatican City: Vatican Observatory, 1996).

William R. Shea and Mariano Artigas, *Galileo in Rome: The Rise and Fall of a Troublesome Genius* (New York: Oxford University Press, 2003).

Maurice A. Finocchiaro, *The Galileo Affair: A Documentary History* (Berkeley and Los Angeles: University of California Press, 1989).

Maurice A. Finocchiaro, *Retrying Galileo, 1633-1992* (Berkeley and Los Angeles: University of California Press, 2005).

February 9: The Scientific Revolution

Required readings:

Peter Harrison and David C. Lindberg, "Early Christianity," in *Science and Religion around the World*, pp. 77-87.

John Hedley Brooke, "Modern Christianity," in *Science and Religion around the World*, pp. 92-97.

Noah Efron, "Myth 9. That Christianity Gave Birth to Modern Science," in *Galileo Goes to Jail*, pp. 79-89.

Margaret J. Osler, "Myth 10. That the Scientific Revolution Liberated Science from Religion," in *Galileo Goes to Jail*, pp. 90-98.

Rodney Stark, "False Conflict: Christianity Is Not Only Compatible with Science—It Created It," *The American Enterprise* (October/November 2003): 27-33.

Related readings:

Peter Harrison, *The Bible, Protestantism, and the Rise of Natural Science* (Cambridge: Cambridge University Press, 1998).

Peter Harrison, *The Fall of Man and the Foundations of Science* (Cambridge: Cambridge University Press, 2007).

Toby E. Huff, *The Rise of Early Modern Science: Islam, China, and the West* (Cambridge: Cambridge University Press, 2003).

Margaret J. Osler, *Reconfiguring the World: Nature, God, and Human Understanding from the Middle Ages to Early Modern Europe* (Baltimore: Johns Hopkins University Press, 2010).

Margaret J. Osler, "Mixing Metaphors: Science and Religion or Natural Philosophy and Theology in Early Modern Europe," *History of Science* 35 (1997): 91-113.

Andrew Cunningham, *The Anatomical Renaissance: The Resurrection the Anatomical Project of the Ancients* (Aldershot, UK: Scholar Press, 1997).

Ole Peter Grell and Andrew Cunningham, eds., *Religio Medici: Medicine and Religion in Seventeenth-Century England* (Aldershot, UK: Scholar Press, 1993).

February 14: The Mechanistic Universe

Required readings:

William B. Ashworth, Jr., "Christianity and the Mechanistic Universe," in *When Science and Christianity Meet*, pp. 61-85.

Richard S. Westfall, "Isaac Newton," in *Science and Religion: A Historical Introduction*, ed. Ferngren (Baltimore: Johns Hopkins University Press, 2002), 153-62.

Margaret C. Jacob, "Christianity and the Newtonian Worldview," in *God and Nature*, pp. 238-55.

Edward B. Davis, "Myth 13. That Isaac Newton's Mechanistic Cosmology Eliminated the Need for God," in *Galileo Goes to Jail*, pp 115-122.

Roger Hahn, "Laplace and the Mechanistic Universe," in *God and Nature*, pp. 256-276.

Related readings:

Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton* (Cambridge: Cambridge University Press, 1983).

Michael Hunter, *Boyle: Between God and Science* (New Haven : Yale University Press, 2009).

Stephen Gaukroger, *Descartes' System of Natural Philosophy* (Cambridge: Cambridge University Press, 2002).

Stephen Gaukroger, *The Collapse of Mechanism and the Rise of Sensibility: Science and the Shaping of Modernity, 1680-1760* (Oxford: Oxford University Press, 2010).

Margaret Osler, *Divine Will and the Mechanical Philosophy: Gassendi and Descartes on Contingency and Necessity in the Created World* (Cambridge: Cambridge University Press, 1994).

Roger Hahn, *Pierre Simon Laplace 1749-1827: A Determined Scientist* (Cambridge, MA: Harvard University Press, 2005).

David Kubrin, "Newton and the Cyclical Cosmos: Providence and the Mechanical Philosophy," *Journal of the History of Ideas* 28 (1967): 325-46, reprinted in *Newton*, ed. I. Bernard Cohen and Richard S. Westfall (New York: W.W. Norton, 1995), pp. 281-96.

February 16: Protestants and Catholics

Required readings:

Charles Webster, "Puritanism, Separatism, and Science," in *God and Nature*, pp. 192-217.

William B. Ashworth, Jr., "Catholicism and Early Modern Science," in *God and Nature*, pp. 136-66.

Lawrence M. Principe, "Myth 11. That Catholics Did Not Contribute to the Scientific Revolution," in *Galileo Goes to Jail*, pp. 99-106.

John L. Heilbron, "The Sun in the Church," *The Sciences* 39 (September/October 1999): 29-35.

Related readings:

Robert K. Merton, "Science, Technology and Society in Seventeenth Century England," *Osiris* 6 (1938), pt. 2, pp. 360-632.

Charles Webster, *The Great Instauration: Science, Medicine, and Reform, 1626-1660* (London: Duckworth, 1975).

I. Bernard Cohen, ed. *Puritanism and the Rise of Modern Science: The Merton Thesis*. New Brunswick, N.J.: Rutgers University Press, 1990.

John Morgan, "The Puritan Thesis Revisited," in *Evangelicals and Science in Historical Perspective*, ed. David N. Livingstone, D. G. Hart, and Mark A. Noll (New York: Oxford University Press, 1999), pp. 43-74.

Steven J. Harris, "Transposing the Merton thesis: Apostolic Spirituality and the Establishment of the Jesuit Scientific Tradition," *Science in Context* 3 (1989): 29-65.

Reijer Hooykaas, "Science and Reformation," *Journal of World History* 3 (1956): 109-39; abridged in *Puritanism and the Rise of Modern Science: the Merton Thesis*, ed. I. Bernard Cohen, 1990, pp. 189-99.

J. L. Heilbron, *The Sun in the Church: Cathedrals as Solar Observatories* (Cambridge, MA: Harvard University Press, 1999).

Peter R. Dear, *Mersenne and the Learning of the Schools* (Ithaca, NY: Cornell University Press, 1988).

Paul Wood, ed., *Science and Dissent in England, 1688-1945* (Aldershot, UK: Ashgate, 2004).

Ole Peter Grell and Andrew Cunningham, eds., *Medicine and the Reformation* (London: Routledge, 1993).

Ole Peter Grell and Andrew Cunningham, eds., *Health Care and Poor Relief in Protestant Europe, 1500-1700* (London: Routledge, 1997).

Ole Peter Grell, Andrew Cunningham, and Jon Arrizabalaga, eds., *Health Care and Poor Relief in Counter-Reformation Europe* (London: Routledge, 1999).

February 21: Religious and Scientific Missions

Required readings:

Steven J. Harris, "Jesuit Scientific Activity in the Overseas Missions, 1540-1773," *Isis* 96 (2005): 71-79.

Florence C. Hsia, "Jesuits, Jupiter's Satellites, and the *Académie Royale des Sciences*," in *The Jesuits: Cultures, Sciences, and the Arts, 1540-1773*, ed. John W. O'Malley et al. (Toronto: University of Toronto Press, 1999), pp. 241-57.

Ines G. Zupanov, "Curar o corpo, sarar a alma: a missão médica jesuíta na Índia do século XVI/Curing the Body, Healing the Soul: The Jesuit Medical Mission in Sixteenth-Century India," *Oriente* 11 (2005): 3-17.

Peter Buck, "Social Diseases and Contagious Disorders: Missionary Science and Medical Missionaries," in Buck, *American Science and Modern China, 1876-1936* (Cambridge: Cambridge University Press, 1980), pp. 8-45.

Related reading:

Florence C. Hsia, *Sojourners in a Strange Land: Jesuits and Their Scientific Missions in Late Imperial China* (Chicago: University of Chicago Press, 2009).

Florence C. Hsia, "Mathematical Martyrs, Mandarin Missionaries, and Apostolic Academicians: Telling Institutional Lives," in *Institutional Culture in Early Modern Society*, ed. Anne Goldgar and Robert Frost (Leiden: Brill, 2004), pp. 3-34.

Catherine Jami, "Science and Technology"; in Nicolas Standaert, ed., *Handbook of Christianity in China* (Leiden: Brill, 2001), vol. 1, pp. 689-704, 717-21.

Ines G. Zupanov, "Conversion, Illness and Possession: Catholic Missionary Healing in Early Modern South Asia," in *Divins remèdes : médecine et religion en Asie du sud*, ed. Ines G. Zupanov and Caterina Guenzi (Paris: Ecole des hautes études en sciences sociales, 2008), pp. 263-300.

Sujit Sivasundaram, *Nature and the Godly Empire: Science and Evangelical Mission in the Pacific, 1795-1850* (Cambridge: Cambridge University Press, 2005).

Andres I. Prieto, *Missionary Scientists: Jesuit Science in Spanish South America, 1570-1810* (Nashville: Vanderbilt University Press, 2010).

Charles M. Good, *The Steamer Parish: The Rise and Fall of Missionary Medicine on an African Frontier* (Chicago: University of Chicago Press, 2004).

Edward V. Gulick, *Peter Parker and the Opening of China* (Cambridge, MA: Harvard University Press, 1974).

David Hardiman, ed., *Healing Bodies, Saving Souls: Medical Missions in Asia and Africa* (Amsterdam: Rodopi, 2006).

David Hardiman, *Missionaries and Their Medicine: A Christian Modernity for Tribal India* (Manchester: Manchester University Press, 2008).

Rennie B. Schoepflin, "Making Doctors and Nurses for Jesus: Medical Missionary Stories and American Children," *Church History* 74:3 (September 2005): 1-34.

Walter J. Vanast, "Arctic Bodies, Frontier Souls: Missionaries and Medical Care in the Canadian North, 1896-1926," Ph.D. dissertation, University of Wisconsin-Madison, 1995.

Peter Williams, "Healing and Evangelism: The Place of Medicine in Later Victorian Protestant Missionary Thinking," in *The Church and Healing*, ed. W. J. Sheils, Vol. 19 of *Studies in Church History* (Oxford: Basil Blackwell, 1982), pp. 271-85.

Edward V. Gulick, *Peter Parker and the Opening of China* (Cambridge, MA: Harvard University Press, 1974).

John J. Paul, "Religion and Medicine in South India: The Scudder Medical Missionaries and the Christian Medical College and Hospital, Vellore," *Fides et Historia* 22 (Fall 1990): 16-29.

February 23: The Enlightenment

Required readings:

John Hedley Brooke, "Modern Christianity," *Science and Religion around the World*, pp. 97-103.

John Hedley Brooke, "Science and Theology in the Enlightenment" in *Religion and Science: History, Method, Dialogue*, ed. W. Mark Richardson and Wesley J. Wildman (New York: Routledge, 1996), pp. 7-27.

Thomas H. Broman, "Matter, Force, and the Christian World View in the Enlightenment," in *When Science and Christianity Meet*, pp. 85-110.

Jacques Roger, "The Mechanistic Conception of Life," in *God and Nature*, pp. 277-95.

Related readings:

Jonathan Israel, *Radical Enlightenment: Philosophy and the Making of Modernity, 1650-1750* (Oxford: Oxford University Press, 2001).

Jonathan Israel, *Enlightenment Contested: Philosophy, Modernity, and the Emancipation of Man 1670–1752* (Oxford: Oxford University Press, 2006).

Henry F. May, *The Enlightenment in America* (New York: Oxford University Press, 1976).

Henry F. May, "The Decline of Providence?" in *Ideas, Faiths, and Feelings: Essays on American Intellectual and Religious history, 1952-1982* (New York, 1982) pp. 130-46.

David Jaffee, "The Village Enlightenment in New England, 1760-1820," *William and Mary Quarterly* 47 (1990): 327-46.

David D. Hall, *Worlds of Wonder, Days of Judgment: Popular Religious Belief in Early New England* (New York: Knopf, 1989).

Perry Miller, "The Judgment of the Smallpox," and "The Experimental Philosophy," in Miller, *The New England Mind: From Colony to Province* (Cambridge, MA: Harvard University Press, 1953), pp. 345-66, 437-46.

I. Bernhard Cohen, "Prejudice again the Introduction of Lightening Rods," in Cohen, *Benjamin Franklin's Science* (Cambridge, MA: Harvard University Press, 1990), pp. 118-58.

Ole Peter Grell and Andrew Cunningham, eds., *Medicine and Religion in Enlightenment Europe* (Aldershot, UK: Ashgate, 2007).

February 28: Natural History and Natural Theology

Required readings:

Janet Browne, "Noah's Flood, the Ark, and the Shaping of Early Modern Natural History," in *When Science and Christianity Meet*, pp. 111-38.

Jonathan R. Topham, "Biology in the Service of Natural Theology: Paley, Darwin, and Bridgewater Treatises," in *Biology and Ideology from Descartes to Dawkins*, ed. Denis R. Alexander and Ronald L. Numbers (Chicago: University of Chicago Press, 2010), pp. 88-113.

Related readings:

D. L. LeMahieu, *The Mind of William Paley: A Philosopher and His Age* (Lincoln: University of Nebraska Press, 1976).

Jonathan Topham, "Science and Popular Education in the 1830s: The Role of the Bridgewater Treatises," *British Journal for the History of Science* 25 (1992): 397-430.

Jonathan Topham, "Beyond the 'Common Context': The Production and Reading of the Bridgewater Treatises," *Isis* 89 (1998): 233-62.

Janet Browne, *The Secular Ark: Studies in the History of Biogeography* (New Haven: Yale University Press, 1983).

John Hedley Brooke, "The Fortunes and Functions of Natural Theology," in Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991), pp. 192-225.

Neal C. Gillespie, "Preparing for Darwin: Conchology and Natural Theology in Anglo-American Natural History," *Studies in History of Biology* 7 (1983): 93-145.

Neal C. Gillespie, "Divine Design and the Industrial Revolution: William Paley's Abortive Reform of Natural Theology," *Isis* 81 (1990): 214-29.

William J. Astore, *Observing God: Thomas Dick, Evangelicalism, and Popular Science in Victorian Britain and America* (Aldershot, UK: Ashgate, 2001).

Aileen Fyfe, *Science and Salvation: Evangelical Popular Science Publishing in Victorian Britain* (Chicago: University of Chicago Press, 2004).

March 2: Naturalizing Nature

Required readings:

John Hedley Brooke, "Modern Christianity," *Science and Religion around the World*, pp. 104-107.

Ronald L. Numbers, "Science without God: Natural Laws and Christian Beliefs," in *When Science and Christianity Meet*, pp. 265-85.

James Secord, "Behind the Veil: Robert Chambers and *Vestiges*," in *History, Humanity, and Evolution*, ed. James R. Moore (Cambridge: Cambridge University Press, 1989), pp. 165-94.

Related readings:

I. Bernhard Cohen, "Prejudice against the Introduction of Lightning Rods," in Cohen, *Benjamin Franklin's Science* (Cambridge, MA: Harvard University Press, 1990), pp. 118-58.

Ronald L. Numbers, *Creation by Natural Law: Laplace's Nebular Hypothesis in American Thought* (Seattle: University of Washington Press, 1977).

Ronald L. Numbers, "Charles Hodge and the Beauties and Deformities of Science," in *Charles Hodge Revisited: A Critical Appraisal of His Life and Work*, ed. John W. Stewart and James Moorhead (Grand Rapids, MI: Eerdmans, 2002), pp. 77-101.

James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation* (Chicago: University of Chicago Press, 2001).

Theodore Dwight Bozeman, *Protestants in an Age of Science: The Baconian Ideal and Antebellum American Religious Thought* (Chapel Hill: University of North Carolina Press, 1977).

Herbert Hovenkamp, *Science and Religion in America, 1800-1860* (Philadelphia: University of Pennsylvania Press, 1978).

Walter H. Conser, Jr., *God and the Natural World: Religion and Science in Antebellum America* (Columbia: University of South Carolina Press, 1993).

E. Brooks Holifield, "Science and Theology in the Old South," in *Science and Medicine in the Old South*, ed. Ronald L. Numbers and Todd L. Savitt (Baton Rouge: Louisiana State University Press, 1989), pp. 127-46.

March 7: Genesis and Geology

Required readings:

Martin J. S. Rudwick, "The Shape and Meaning of Earth History," in *God and Nature*, pp. 296-321.

James R. Moore, "Geologists and Interpreters of Genesis in the Nineteenth Century," in *God and Nature*, pp. 322-50.

Mott T. Greene, "Genesis and Geology Revisited: The Order of Nature and the Nature of Order in Nineteenth-Century Britain," in *When Science and Christianity Meet*, pp. 139-60.

Related readings:

Martin J. S. Rudwick, *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution* (Chicago: University of Chicago Press, 2005).

Martin J. S. Rudwick, *Worlds before Adam : the reconstruction of geohistory in the age of reform* (Chicago: University of Chicago Press, 2008).

Morgan B. Sherwood, "Genesis, Evolution, and Geology in America before Darwin: The Dana-Lewis Controversy, 1856-1857," in *Toward a History of Geology*, ed. Cecil J. Schneer (Cambridge, MA: MIT Press, 1969), pp. 305-316.

Rodney Lee Stiling, "The Diminishing Deluge: Noah's Flood in Nineteenth-Century American Geology and Theology," Ph.D. dissertation, University of Wisconsin-Madison, 1992.

Rodney Lee Stiling, "Scriptural Geology in America," in *Evangelicals and Science in Historical Perspective*, ed. David N. Livingstone, D. G. Hart, and Mark A. Noll (New York: Oxford University Press, 1999), pp. 177-92.

March 9: The Origin and Antiquity of Humans

Required readings:

G. Blair Nelson, "Men before Adam!": American Debates over the Unity and Antiquity of Humanity," in *When Science and Christianity Meet*, pp. 161-82.

Bowdoin Van Riper, "The Public Debate over Human Antiquity, 1859-75," in Van Riper, *Man among the Mammoths: Victorian Science and the Discovery of Human Prehistory* (Chicago: University of Chicago Press, 1993), pp. 144-83.

Thomas R. Trautmann, "The Revolution in Ethnological Time," *Man*, new ser. 27 (1992): 379-97.

Related readings:

David N. Livingstone, *Adam's Ancestors: Race, Religion, and the Politics of Human Origins* (Baltimore: Johns Hopkins University Press, 2008).

William Stanton, *The Leopard's Spots: Scientific Attitudes toward Race in America, 1815-59* (Chicago: University of Chicago Press, 1960).

Stephen Jay Gould "Morton's Ranking of Races by Cranial Capacity: Unconscious Manipulation of Data May Be a Scientific Norm," *Science* 200 (1978): 503-509; reprinted as "American Polygeny and Craniometry before Darwin," in *The Mismeasure of Man* (New York: W. W. Norton, 1981), pp. 30-72.

Lester D. Stephens, *Science, Race, and Religion in the American South: John Bachman and the Charleston Circle of Naturalists* (Chapel Hill: University of North Carolina Press, 1999).

Bruce Dain, *A Hideous Monster of the Mind: American Race Theory in the Early Republic* (Cambridge, Mass.: Harvard University Press, 2002).

Reginald Horsman, *Josiah Nott of Mobile: Southerner, Physician, and Racial Theorist* (Baton Rouge: Louisiana State University Press, 1987).

Terry A. Barnhart, *Ephraim George Squier and the Development of American Anthropology* (Lincoln: University of Nebraska Press, 2005).

Thomas R. Trautmann, *Lewis Henry Morgan and the Invention of Kinship* (Berkeley and Los Angeles: University of California Press, 1987).

Ronald L. Numbers, "'The Most Important Biblical Discovery of Our Time': William Henry Green and the Demise of Ussher's Chronology," *Church History* 69 (2000): 257-76.

Spring Break

March 21: Charles Darwin and Organic Evolution

John Hedley Brooke, "The Relations between Darwin's Science and His Religion," in *Darwinism and Divinity*, ed. John R. Durant (Oxford: Blackwell, 1985), pp. 40-75.

James Moore, "Myth 16. That Evolution Destroyed Darwin's Faith in Christianity—until He Reconverted on His Deathbed," *Galileo Goes to Jail*, pp. 142-151.

Nicolaas A. Rupke, "Myth 15. That the Theory of Organic Evolution Is Based on Circular Reasoning," in *Galileo Goes to Jail*, pp. 131-141.

Related readings:

Janet Browne, *Charles Darwin*, 2 vols. (New York: Alfred Knopf, 1995, 2002).

Adrian Desmond and James R. Moore, *Darwin* (New York: Warner Books, 1991).

John Hedley Brooke, "Darwin and Victorian Christianity" in *The Cambridge Companion to Darwin*, ed. Gregory Radick and Jonathan Hodge (Cambridge: Cambridge University Press, 2003), pp. 192-213.

John Hedley Brooke, "Darwin, Design, and the Unification of Nature," in *Science, Religion, and the Human Experience*, ed. James D. Proctor (New York: Oxford University Press, 2005), pp. 165-83.

John Hedley Brooke, "'Laws Impressed on Matter by the Creator'? The Origin and the Question of Religion," in *The Cambridge Companion to the "Origin of Species,"* ed.

Michael Ruse and Robert J. Richards (Cambridge: Cambridge University Press, 2009), pp. 256-74.

Frank Burch Brown, "The Evolution of Darwin's Theism," *Journal of the History of Biology* 19 (1986): 1-45.

David Kohn, "Darwin's Ambiguity: The Secularization of Biological Meaning," *British Journal for the History of Science* 22 (1989): 215-39.

John van Wyhe, "Mind the Gap: Did Darwin Avoid Publishing His Theory for Many Years?" *Notes and Records of the Royal Society* 61 (2007): 177-205.

March 23: Religious Responses to Darwinism

John Hedley Brooke, "Modern Christianity," in *Science and Religion around the World*, pp. 107-11.

David N. Livingstone, "Re-placing Darwinism and Christianity," in *When Science and Christianity Meet*, pp. 183-202.

David N. Livingstone, "Myth 17. That Huxley Defeated Wilberforce in Their Debate over Evolution and Religion," *Galileo Goes to Jail*, pp. 152-160.

Jon H. Roberts, "Myth 18. That Darwin Destroyed Natural Theology," *Galileo Goes to Jail*, pp. 161-169.

Jon H. Roberts, "Darwinism, American Protestant Thinkers, and the Puzzle of Motivation," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 145-72.

OR

R. Scott Appleby, "Exposing Darwin's 'Hidden Agenda': Roman Catholic Responses to Evolution, 1875-1925," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 173-208.

Related readings:

David N. Livingstone, "Science, Region, and Religion: The Reception of Darwinism in Princeton, Belfast, and Edinburgh," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 7-38.

Eric D. Anderson, "Black Responses to Darwinism, 1859-1915," in *Disseminating Darwinism: The Role of Place, Race, Religion and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 247-66.

David N. Livingstone and Mark A. Noll, "B. B. Warfield (1851-1921): A Biblical Inerrantist as Evolutionist," *Isis* 91 (2000): 283-304.

James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900* (Cambridge: Cambridge University Press, 1979).

Jon H. Roberts, *Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900* (Madison: University of Wisconsin Press, 1988).

David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter between Evangelical Theology and Evolutionary Thought* (Grand Rapids, MI: Eerdmans, 1987).

Ronald L. Numbers, *Darwinism Comes to America* (Cambridge, MA: Harvard University Press, 1998).

Ronald L. Numbers, "Experiencing Evolution: Varieties of Psychological Responses to the Claims of Science and Religion," in *Science, Religion, and the Human Experience*, ed. James D. Proctor (New York: Oxford University Press, 2005), pp. 205-33.

A. Hunter Dupree, *Asa Gray, 1810-1888* (Cambridge, Mass.: Harvard University Press, 1959).

Mariano Artigas, Thomas F. Glick, and Rafael A. Martínez. *Negotiating Darwin: The Vatican Confronts Evolution, 1877-1902* (Baltimore: Johns Hopkins University Press, 2006).

Jon H. Roberts, *Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900* (Madison: University of Wisconsin Press, 1988).

Don O'Leary, *Roman Catholicism and Modern Science: A History* (New York: Continuum, 2006).

Peter J. Bowler, *Monkey Trials and Gorilla Sermons: Evolution and Christianity from Darwin to Intelligent Design* (Cambridge, MA: Harvard University Press, 2007).

March 28: Modern Judaism and Islam

Required readings:

Geoffrey Cantor, "Modern Judaism," in *Science and Religion around the World*, pp. 44-66.

Ekmeleddin İhsanoğlu, "Modern Islam," in *Science and Religion around the World*, pp.148-74.

Marc Swetlitz, "American Jewish Responses to Darwin and Evolutionary Theory, 1860-1890," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 209-46.

OR

Marwa Elshakry, "The Gospel of Science and American Evangelism in Late Ottoman Beirut," *Past and Present*, no. 196 (August 2007): 173-214.

Related readings:

Ekmeleddin İhsanoğlu, ed., *Cultural Contacts in Building a Universal Civilization: Islamic Contributions* (Istanbul: Research Centre for Islamic History, Art and Culture, 2005).

Miri Shefer-Mossensohn, *Ottoman Medicine: Healing and Medical Institutions, 1500–1700* (Albany: State University of New York Press, 2009).

Marwa Elshakry, *Reading Darwin in the Middle East* (Chicago: University of Chicago Press, forthcoming).

Marwa Elshakry, "The Exegesis of Science in Twentieth Century Arabic Interpretations of the Qur'an" in *Interpreting Nature and Scripture: History of a Dialogue*, ed. Jitse M. van der Meer and Scott H. Mandelbrote, 2 vols.(Leiden: Brill, 2008), 2: 491-524.

Geoffrey Cantor, *Quakers, Jews, and Science: Religious Responses to Modernity and the Sciences in Britain, 1650-1900* (Oxford: Oxford University Press, 2005).

Geoffrey Cantor and Marc Swetlitz, eds. *Jewish Tradition and the Challenge of Darwinism* (Chicago: University of Chicago Press, 2006).

Ulrich Charpa and Ute Deichmann, eds., *Jews and Sciences in German Contexts: Case Studies from the 19th and 20th Centuries* (Tübingen: Mohr Siebeck, 2007).

Noah Efron, *Judaism and Science: A Historical Introduction* (Westport, CT: Greenwood Press, 2007).

David A. Hollinger, *Science, Jews, and Secular Culture: Studies in Mid-Twentieth-Century American Intellectual History* (Princeton, NJ: Princeton University Press, 1996).

Max Jammer, *Einstein and Religion: Physics and Theology* (Princeton, NJ: Princeton University Press, 1999).

Yakov Rabkin and Ira Robinson, eds. *The Interaction of Scientific and Jewish Cultures in Modern Times* (Lewiston, NY: Edwin Mellen Press, 1995).

Norbert M. Samuelson, *Jewish Faith and Modern Science: On the Death and Rebirth of Jewish Philosophy* (Lanham, MD: Rowman and Littlefield, 2008).

Hava Tirosh-Samuelson, ed., *Judaism and Ecology: Created World and Revealed Word*. (Cambridge, MA: Center for the Study of World Religions, 2003).

March 30: Science and Religion in Asia and Africa

Required readings (any **three** of the following):

Mark Csikszentmihalyi, "Early Chinese Religions," in *Science and Religion around the World*, pp. 175-94.

B. V. Subbarayappa, "Indic Religions," in *Science and Religion around the World*, pp. 195-209.

Donald S. Lopez, Jr., "Buddhism," in *Science and Religion around the World*, pp. 210-28.

Steven Feierman and John M. Janzen, "African Religions," in *Science and Religion around the World*, pp. 229-51.

Related readings:

Nathan Sivin, *Medicine, Philosophy, and Religion in Ancient China: Researches and Reflections* (Aldershot, U.K.: Ashgate, 1995).

Kenneth G. Zysk, *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery* (New York: Oxford University Press, 1991).

Kenneth G. Zysk, *Religious Healing in the Veda: With Translations and Annotations of Medical Hymns from the Rgveda and the Atharvaveda and Renderings from the Corresponding Ritual Texts* (Philadelphia: American Philosophical Society, 1985).

Janet Gyatso, "The Authority of Empiricism and the Empiricism of Authority: Tibetan Medicine and Religion on the Eve of Modernity." *Comparative Studies of South Asia, Africa, and the Middle East* 24 (2004): 83-96.

Donald S. Lopez, Jr., *Buddhism and Science: A Guide for the Perplexed* (Chicago: University of Chicago Press, 2008).

C. Mackenzie Brown, "Hindu Responses to Darwinism: Assimilation and Rejection in a Colonial and Post-Colonial Context," *Science and Education* 19 (2010): 705-38.

C. Mackenzie Brown, "The Western Roots of Avataric Evolutionism in Colonial India." *Zygon* 42 (2007): 423–47; "Colonial and Post-Colonial Elaborations of Avataric Evolutionism," *ibid.*, 715–47.

Robin Horton, *Patterns of Thought in Africa and the West: Essays on Magic, Religion and Science* (Cambridge: Cambridge University Press, 1993).

April 6: Plagues and Miracles

Required readings:

Ronald L. Numbers and Ronald C. Sawyer, "Medicine and Christianity in the Modern World," in *Health/Medicine and the Faith Traditions*, ed. Martin E. Marty and Kenneth L. Vaux (Philadelphia: Fortress Press, 1982), pp. 52-92.

Rennie B. Schoepflin, "Myth 14. That the Church Denounced Anesthesia in Childbirth on Biblical Grounds," in *Galileo Goes to Jail*, pp. 123-130.

Robert Bruce Mullin, "Science, Miracles, and the Prayer-Gauge Debate," in *When Science and Christianity Meet*, pp. 203-24.

Related readings:

Robert Bruce Mullin, *Miracles and the Modern Religious Imagination* (New Haven: Yale University Press, 1996), Chapter 4, "The Question of Healing."

Frank M. Turner, "Rainfall, Plagues, and the Prince of Wales: A Chapter in the Conflict of Religion and Science," in Turner, *Contesting Cultural Authority: Essays in Victorian Intellectual Life* (Cambridge: Cambridge University Press, 1993), pp. 151-70.

Perry Miller, "The Judgment of the Smallpox," in Miller, *The New England Mind: From Colony to Province* (Cambridge, MA: Harvard University Press, 1953), pp. 345-66.

Maxine Van de Wetering, "A Reconsideration of the Inoculation Controversy," *New England Quarterly* 58 (1985): 46-67.

Charles Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962), esp. chaps. 2, 7, 12.

Steven M. Stowe, "Religion, Science, and the Culture of Medical Practice in the American South, 1800-1870," in *The Mythmaking Frame of Mind: Social Imagination and American Culture*, ed. James Gilbert and Others (Belmont, CA: Wadsworth, 1993), pp. 1-24.

April 11: Divine Healing

Required readings:

Rennie B. Schoepflin, "The Christian Science Tradition," in *Caring and Curing: Health and Medicine in the Western Religious Traditions*, ed. Ronald L. Numbers and Darrel W. Amundsen (New York: Macmillan, 1986), pp. 421-46.

Grant Wacker, "The Pentecostal Tradition," in *Caring and Curing: Health and Medicine in the Western Religious Traditions*, ed. Ronald L. Numbers and Darrel W. Amundsen (New York: Macmillan, 1986), pp. 514-38.

Robert A. Orsi, "The Cult of the Saints and the Reimagination of the Space and Time of Sickness in Twentieth-Century American Catholicism," *Literature and Medicine* 8 (1989): 63-77.

Related readings:

Rennie B. Schoepflin, *Christian Science on Trial: Religious Healing in America* (Baltimore: Johns Hopkins University Press, 2003).

Ellen M. Umansky, *From Christian Science to Jewish Science: Spiritual Healing and American Jews* (New York: Oxford University Press, 2005).

Shawn Francis Peters, *When Prayer Fails: Faith Healing, Children, and the Law* (New York: Oxford University Press, 2008).

Grant Wacker, *Heaven Below: Early Pentecostals and American Culture* (Cambridge, MA: Harvard University Press, 2001).

Randall J. Stephens, *The Fire Spreads: The Origins of Holiness and Pentecostalism in the American South* (Cambridge, MA: Harvard University Press, 2008).

James Opp, *The Lord for the Body: Religion, Medicine, and Protestant Faith Healing in Canada, 1880-1930* (Montreal and Kingston: McGill-Queens University Press, 2005).

Heather D. Curtis, *Faith in the Great Physician: Suffering and Divine Healing in American Culture, 1860-1900* (Baltimore: Johns Hopkins University Press, 2007).

Rick Ostrander, *The Life of Prayer in a World of Science: Protestants, Prayer, and American Culture, 1870-1930* (New York: Oxford University Press, 1999).

David Edwin Harrell, Jr., *All Things Are Possible: The Healing and Charismatic Revivals in Modern America* (Bloomington: Indiana University Press, 1975).

David Edwin Harrell, Jr., *Oral Roberts: An American Life* (Bloomington: Indiana University Press, 1985).

Robert A. Orsi, *Thank You, Saint Jude: Women's Devotion to the Patron Saint of Hopeless Causes* (New Haven: Yale University Press, 1996).

Colleen McDannell, "Lourdes Water and American Catholicism," in McDannell, *Material Christianity: Religion and Popular Culture in America* (New Haven: Yale University Press, 1995), pp. 132-62.

Stephanie Y. Mitchem, *African American Folk Healing* (New York: New York University Press, 2007).

Stephanie Y. Mitchem and Emilie M. Townes, eds., *Faith, Health, and Healing in African American Life* (Westport, CT: Praeger, 2008).

Albert J. Raboteau, "The Afro-American Traditions," in *Caring and Curing: Health and Medicine in the Western Religious Traditions*, ed. Ronald L. Numbers and Darrel W. Amundsen (New York: Macmillan, 1986), pp. 539-62.

Yvonne P. Chireau, "'Medical Doctors Can't Do You No Good': Conjure and African American Traditions of Healing," in Chireau, *Black Magic: Religion and the African American Conjuring Tradition* (Berkeley and Los Angeles: University of California Press, 2003), pp. 91-119, 187-97.

Carolyn Morrow Long, *Spiritual Merchants: Religion, Magic, and Commerce* (Knoxville: University of Tennessee Press, 2001).

Miguel A. De La Torre, *Santería: The Beliefs and Rituals of a Growing Religion in America* (Grand Rapids, MI: Eerdmans, 2004).

Bobette Perrone, H. Henrietta Ctockel, and Victoria Krueger, *Medicine Women, Curanderas, and Women Doctors* (Norman: University of Oklahoma Press, 1989).

Anne Fadiman, *The Spirit Catches You and You Fall Down: A Hmong Child and her American Doctors and the Collision of Two Cultures* (New York: Farrar, Straus and Giroux, 1997).

Meredith B. McGuire, *Ritual Healing in Suburban America* (New Brunswick, NJ: Rutgers University Press, 1988).

Jacalyn Duffin, *Medical Miracles: Doctors, Saints, and Healing in the Modern World* (New York: Oxford University Press, 2009).

Ruth Harris, *Lourdes: Body and Spirit in the Secular Age* (New York: Viking, 1999).

April 13: Psychology and Sex

Required readings:

Peter Harrison, "Myth 12. That René Descartes Originated the Mind- Body Distinction," in *Galileo Goes to Jail*, pp 107-114.

Deborah Coon, "Testing the Limits of Sense and Science: American Experimental Psychologists Combat Spiritualism, 1880-1920," *American Psychologist* 47 (1992): 143-51.

Jon H. Roberts, "Psychoanalysis and American Christianity, 1900-1945," in *When Science and the Christian Tradition*, pp. 225-44.

James H. Jones, "Annals of Sexology: Dr. Yes," *New Yorker*, August 25-September 1, 1997, pp. 98-113.

Related readings:

Roger Cooter, "Secular Methodism," in Cooter, *The Cultural Meaning of Popular Science: Phrenology and the Organization of Consent in Nineteenth-Century Britain* (Cambridge: Cambridge University Press, 1984), pp. 169-98.

Robert C. Fuller, *Mesmerism and the American Cure of Souls* (Philadelphia: University of Pennsylvania Press, 1982).

Christopher G. White, *Unsettled Minds: Psychology and the American Search for Spiritual Assurance, 1830-1940* (Berkeley and Los Angeles: University of California Press, 2008).

Ann Taves, *Fits, Trances, and Visions: Experiencing Religion and Explaining Experience from Wesley to James* (Princeton, NJ: Princeton University Press, 1999).

Paul Jerome Croce, *Science and Religion in the Era of William James: Eclipse of Certainty, 1820-1880* (Chapel Hill: University of North Carolina Press, 1995).

David A. Hollinger, "'Damned for God's Glory: William James and the Scientific Vindication of Protestant Culture,'" in *William James and a Science of Religions: Reexperiencing The Varieties of Religious Experience*, ed. Wayne Proudfoot (New York: Columbia University Press, 2004)), pp. 9-30.

R. Laurence Moore, *In Search of White Crows: Spiritualism, Parapsychology, and American Culture* (New York: Oxford University Press, 1977).

Ronald L. Numbers and Janet S. Numbers, "Millerism and Madness: A Study of 'Religious Insanity' in Nineteenth-Century America," in *The Disappointed: Millerism and Millenarianism in the Nineteenth Century*, ed. Ronald L. Numbers and Jonathan M. Butler (Bloomington: Indiana University Press, 1987), pp. 92-118.

David Gollaher, *Voice for the Mad: The Life of Dorothea Dix* (New York: Free Press, 1995).

E. Brooks Holifield, *A History of Pastoral Care in America: From Salvation to Self-Realization* (Nashville: Abingdon Press, 1983).

Susan E. Myers-Shirk, *Helping the Good Shepherd: Pastoral Counselors in a Psychotherapeutic Culture, 1925-1975* (Baltimore: Johns Hopkins University Press, 2009).

Dorothy Ross, *G. Stanley Hall: The Psychologist as Prophet* (Chicago: University of Chicago Press, 1972).

Ronald L. Numbers, "Sex, Science, and Salvation: The Sexual Advice of Ellen G. White and John Harvey Kellogg," in *Right Living: An Anglo-American Tradition of Self-Help Medicine and Hygiene*, ed. Charles E. Rosenberg (Baltimore: Johns Hopkins University Press, 2003), pp. 206-26.

Leslie Woodcock Tentler, "'The Abominable Crime of Onan': Catholic Pastoral Practice and Family Limitation in the United States, 1875-1919," *Church History* 71 (2002): 307-40.

Amy Laura Hall, *Conceiving Parenthood: American Protestantism and the Spirit of Reproduction* (Grand Rapids, MI: Eerdmans, 2008).

Jeffrey P. Moran, *Teaching Sex: The Shaping of Adolescence in the 20th Century* (Cambridge, Mass.: Harvard University Press, 2000).

James H. Jones, *Alfred C. Kinsey: A Public/Private Life* (New York: W. W. Norton, 1997).

Margaret Marsh and Wanda Ronner, *The Fertility Doctor: John Rock and the Reproductive Revolution* (Baltimore: Johns Hopkins University Press, 2008).

Leslie Woodcock Tentler, *Catholics and Contraception: An American History* (Ithaca, NY: Cornell University Press, 2004).

Dallas A. Blanchard, *The Anti-Abortion Movement and the Rise of the Religious Right: From Polite to Fiery Protest* (New York: Twayne, 1994).

James Risen and Judy L. Thomas, *Wrath of Angels: The American Abortion War* (New York: Basic Books, 1998).

Didi Herman, *The Antigay Agenda: Orthodox Vision and the Christian Right* (Chicago: University of Chicago Press, 1997).

Faye Ginsburg, "Saving America's Souls: Operation Rescue's Crusade against Abortion," in *Fundamentalisms and the State: Remaking Politics, Economies, and Militance*, vol. 3 of *The Fundamentalism Project*, ed. Martin E. Martin and R. Scott Appleby (Chicago: University of Chicago Press, 1993), 557-88.

John H. Evans, *Contested Reproduction: Genetic Technologies, Religion, and Public Debate* (Chicago: University of Chicago Press, 2010).

John C. Burnham, "The Encounter of Christian Theology with Deterministic Psychology and Psychoanalysis," *Bulletin of the Menninger Clinic* 49 (1985): 321-52.

Andrew R. Heinze, *Jews and the American Soul: Human Nature in the Twentieth Century* (Princeton, NJ: Princeton University Press, 2004).

Leila Zenderland, "Biblical Biology: American Protestant Social Reformers and the Early Eugenics Movement," *Science in Context* 11 (1998): 511-25.

Didi Herman, "Devil Discourse and the Shifting Construction of Homosexuality in *Christianity Today*," in Herman, *The Antigay Agenda: Orthodox Vision and the Christian Right* (Chicago: University of Chicago Press, 1997), pp. 25-91, 204-209.

Margaret Lamberts Bendroth, "Fundamentalism and the Family: Gender, Culture, and the American Pro-Family Movement," *Journal of Women's History* 10 (1999): 35-54.

Pamela E. Klassen, *Blessed Events: Religion and Home Birth in America* (Princeton, NJ: Princeton University Press, 2001).

R. Marie Griffith, *Born Again Bodies: Flesh and Spirit in American Christianity* (Berkeley and Los Angeles: University of California Press, 2004).

April 18: Antievolution in the 1920s

Required readings:

Edward J. Larson, "The Scopes Trial in History and Legend," in *When Science and Christianity Meet*, ed. David C. Lindberg and Ronald L. Numbers (University of Chicago Press, 2003), pp. 245-64.

Edward J. Larson, "Myth 20. That the Scopes Trial Ended in Defeat for Antievolutionism," *Galileo Goes to Jail*, pp. 178-186.

Constance Areson Clark, "Evolution for John Doe: Pictures, the Public, and the Scopes Trial Debate," *Journal of American History* 87 (2001): 1275-1303.

Edward B. Davis, "Science and Religious Fundamentalism in the 1920s," *American Scientist* 93 (2005): 253-60.

Related readings:

Ronald L. Numbers, "The Scopes Trial: History and Legend," in Numbers, *Darwinism Comes to America* (Cambridge, MA: Harvard University Press, 1998), pp. 76-91, 187-92.

Ronald L. Numbers and Lester D. Stephens, "Darwinism in the American South," in *Disseminating Darwinism: The Role of Place, Race, Religion and Gender*, ed. Ronald L. Numbers and John Stenhouse (Cambridge: Cambridge University Press, 1999), pp. 123-43.

Edward J. Larson, *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion* (New York: Basic Books, 1997).

Constance Areson Clark, *God--or Gorilla: Images of Evolution in the Jazz Age* (Baltimore: Johns Hopkins University Press, 2008).

Jeffrey P. Moran, "The Scopes Trial and Southern Fundamentalism in Black and White: Race, Region, and Religion," *Journal of Southern History* 70 (2004): 95-120.

Jeffrey P. Moran, "Reading Race into the Scopes Trial: African American Elites, Science, and Fundamentalism," *Journal of American History* (2003): 891-911.

Edward B. Davis, "A Whale of a Tale: Fundamentalist Fish Stories," *Perspectives on Science and Christian Faith* 43 (1991): 224-37.

Edward B. Davis, "Fundamentalist Cartoons, Modernist Pamphlets, and the Religious Image of Science in the Scopes Era," in *Religion and the Culture of Print in Modern America*, ed. Charles L. Cohen and Paul S. Boyer (Madison: University of Wisconsin Press, 2008), 175-98.

Marcel C. LaFollette, *Reframing Scopes: Journalists, Scientists, and Lost Photographs from the Trial of the Century* (Lawrence: University Press of Kansas, 2008).

Michael Lienesch, *In the Beginning: Fundamentalism, the Scopes Trial, and the Making of the Antievolution Movement* (Chapel Hill: University of North Carolina Press, 2009).

Adam Laats, *Fundamentalism and Education in the Scopes Era: God, Darwin, and the Roots of America's Culture Wars* (New York: Palgrave Macmillan, 2010).

Paul K. Conkin, *When All the Gods Trembled: Darwinism, Scopes, and American Intellectuals* (Lanham, MD: Rowman & Littlefield, 1998).

Christine Rosen, *Preaching Eugenics: Religious Leaders and the American Eugenics Movement* (New York: Oxford University Press, 2004).

April 20: Scientific Creationism

Required readings:

Ronald L. Numbers, "The Creationists," in *God and Nature*, pp. 391-423.

Ronald L. Numbers, "Myth 24. That Creationism Is a Uniquely American Phenomenon," *Galileo Goes to Jail*, pp. 215-223.

Related readings:

Ronald L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design*, expanded ed. (Cambridge, Mass.: Harvard University Press, 2006).

Edward J. Larson, *Trial and Error: The American Controversy over Creation and Evolution*, updated ed. (New York: Oxford University Press, 1989).

Christopher P. Toumey, *God's Own Scientists: Creationists in a Secular Age* (New Brunswick, NJ: Rutgers University Press, 1994).

James Moore, "The Creationist Cosmos of Protestant Fundamentalism," in *Fundamentalisms and Society: Reclaiming the Sciences, the Family, and Education*, vol. 2 of *The Fundamentalism Project*, ed. Martin E. Marty and R. Scott Appleby (Chicago: University of Chicago Press, 1993), pp. 42-72.

April 25: Intelligent Design

Required readings:

Ronald L. Numbers, "Intelligent Design" in *The Creationists: From Scientific Creationism to Intelligent Design*, expanded ed. (Cambridge, Mass.: Harvard University Press, 2006), pp. 373-98.

Margaret Talbot, "Darwin in the Dock: Intelligent Design Has Its Day in Court," *New Yorker*, December 5, 2005, pp. 66-77.

Michael Ruse, "Myth 23. That 'Intelligent Design' Represents a Scientific Challenge to Evolution," *Galileo Goes to Jail*, pp. 206-214.

Robert J. Richards, "Myth 19. That Darwin and Haeckel Were Complicit in Nazi Biology," *Galileo Goes to Jail*, pp. 170-177.

Related readings:

Barbara Forrest and Paul Gross, *Creationism's Trojan Horse: The Wedge of Intelligent Design* (New York: Oxford University Press, 2004).

Robert T. Pennock, *Tower of Babel: The Evidence against the New Creationism* (Cambridge, Mass.: MIT Press, 1999).

Michael Ruse, *The Evolution-Creation Struggle* (Cambridge, Mass.: Harvard University Press, 2005).

William A. Dembski and Michael Ruse, eds., *Debating Design: From Darwin to DNA* (Cambridge: Cambridge University Press, 2004).

April 27: God and Modern Physics

Required readings:

Erwin N. Hiebert, "Modern Physics and Christian Faith," in *God and Nature*, pp. 424-47.

Matthew Stanley, "Myth 21. That Einstein Believed in a Personal God," in *Galileo Goes to Jail*, pp. 187-195

Daniel Patrick Thurs, "Myth 22. That Quantum Physics Demonstrated the Doctrine of Free Will," in *Galileo Goes to Jail*, pp.196-205.

Brooke, "Modern Christianity," pp. 111-14.

Related readings:

Max Jammer, *Einstein and Religion: Physics and Theology* (Princeton, NJ: Princeton University Press, 1999).

Matthew Stanley, *Practical Mystic: Religion, Science, and A. S. Eddington* (Chicago: University of Chicago Press, 2007).

Edward B. Davis, "Prophet of Science: Arthur Holly Compton on Science, Freedom, Religion, and Morality," *Perspectives on Science and Christian Faith* 61 (2009): 73-83, 175-90, 240-53.

Peter H. Denton, *The ABC of Armageddon: Bertrand Russell on Science, Religion, and the Next War, 1919-1938* (Albany: State University of New York Press, 2001).

Nicolaas A. Rupke, ed., *Eminent Lives in Twentieth-Century Science and Religion*, 2nd ed. (Frankfurt am Main: Peter Lang, 2009). Includes chapters on Charles A. Coulson, Arthur S. Eddington, Albert Einstein, Pascual Jordan, Robert A. Millikan, Michael I. Pupin, Abdus Salam, and others.

May 2: Science and Secularization

Required readings:

Bernard Lightman, "Unbelief," in *Science and Religion around the World*, pp. 252-77.

John Hedley Brooke, "Myth 25. That Modern Science Has Secularized Western Culture," *Galileo Goes to Jail*, pp. 224-232.

David A. Hollinger, "Justification by Verification: The Scientific Challenge to the Moral Authority of Christianity in Modern America," in *Religion and Twentieth-Century American Intellectual Life*, ed. Michael H. Lacey (Cambridge: Cambridge University Press, 1989), pp. 116-35.

John H. Evans, "After the Fall: Attempts to Establish an Explicitly Theological Voice in Debates over Science and Medicine after 1960," in *The Secular Revolution*, ed. Christian Smith (Berkeley and Los Angeles: University of California Press, 2003), pp. 434-61.

Elaine Howard Ecklund, "Religion and Spirituality among Scientists," *Contexts* 7 (Winter 2008): 12-15.

Related readings:

John Hedley Brooke, "Science and Secularization," in *Reinventing Christianity: Nineteenth-Century Contexts*, ed. Linda Woodhead (Aldershot, England: Ashgate, 2001), pp. 229-50.

Jon H. Roberts, "Religion, Secularization, and Cultural Spaces in America," in *American Catholic Traditions: Resources for Renewal*, ed. Sandra Yocum Mize and William Portier (Maryknoll, N.Y.: Orbis Books, 1997), pp. 185-209.

Jon H. Roberts and James Turner, *The Sacred and the Secular University* (Princeton, N.J.: Princeton University Press, 2000).

David A. Hollinger, *Science, Jews, and Secular Culture: Studies in Mid-Twentieth-Century American Intellectual History* (Princeton: Princeton University Press, 1996).

David A. Hollinger, "The 'Secularization' Question and the United States in the Twentieth Century," *Church History* 70 (2001): 132-43.

James Gilbert, *Redeeming Culture: American Religion in an Age of Science* (Chicago: University of Chicago Press, 1997).

R. Laurence Moore, "Secularization: Religion and the Social Sciences," in *Between the Times: The Travail of the Protestant Establishment in America, 1900-1960*, ed. William R. Hutchison (Cambridge: Cambridge University press, 1989), pp. 233-52.

Murray G. Murphey, "On the Scientific Study of Religion in the United States, 1870-1980," in *Religion and Twentieth-Century American Intellectual Life*, ed. Michael J. Lacey (Cambridge: Cambridge University press, 1989), pp. 136-71.

Michael J. Buckley, *At the Origins of Modern Atheism* (New Haven: Yale University Press, 1987).

Susan Budd, *Varieties of Unbelief: Atheists and Agnostics in English Society 1850-1960* (New York: Holmes and Meier, 1977).

Bernard Lightman, *The Origins of Agnosticism: Victorian Unbelief and The Limits of Knowledge* (Baltimore: Johns Hopkins University Press, 1987).

Charles Taylor, *A Secular Age* (Cambridge, Mass.: Harvard University Press, 2007).

Frank Miller Turner, *Between Science and Religion: The Reaction to Scientific Naturalism in Late Victorian England* (New Haven: Yale University Press, 1974).

Frank Miller Turner, "The Victorian Conflict between Science and Religion: A Professional Dimension," *Isis* 69 (1978): 356-76.

Peter J. Bowler, *Reconciling Science and Religion: The Debate in Early-Twentieth-Century Britain* (Chicago: University of Chicago Press, 2001).

James Turner, *Without God, Without Creed: The Origins of Unbelief in America* (Baltimore: Johns Hopkins University Press, 1985).

Edward J. Larson and Larry Witham, "Scientists Are Still Keeping the Faith," *Nature* 386 (1997): 435-36.

Edward J. Larson and Larry Witham, "Scientists and Religion in America," *Scientific American* 281 (September 1999): 88-93.

Elaine Howard Ecklund, *Science vs. Religion: What Scientists Really Think* (New York: Oxford University Press, 2010).

May 4: Contemporary Issues

No required readings.

SCIENCE, MEDICINE, AND RELIGION
 History of Science/Medical History & Bioethics 331
 Spring 2011
 11:00-12:15 Monday & Wednesday
 1010 Medical Sciences Center

Instructor:

Ronald L. Numbers, Hildale Professor of the History of Science and Medicine, 1432 Medical Sciences Center, rnumbers@wisc.edu

Course description:

This course explores the complex and often perplexing historical issues raised by three overlapping arenas of human expression: science, medicine, and religion. We begin with asking some broad questions about the place of scientific and medical inquiry within a variety of religious contexts, including Judaism, Christianity, and Islam. We then focus on debates specific to particular domains of scientific and medical inquiry, ranging from the religious implications of Copernicanism to natural theology, evolutionary theory, and the efficacy of intercessory prayer.

Course requirements:

Classes will consist primarily of discussions. To this end, students must read the assigned texts and come to every class prepared to participate in discussion. Undergraduates will write a short research paper (of no more than 10 typed double-spaced pages) based largely on primary sources; graduate students may have up to 20 pages. All paper topics must be approved in advance. There will also be a final examination.

Textbooks:

David C. Lindberg and Ronald L. Numbers, eds., *God and Nature: Historical Essays on the Encounter between Christianity and Science* (Berkeley and Los Angeles: University of California Press, 1986)

David C. Lindberg and Ronald L. Numbers, eds., *When Science and Christianity Meet* (University of Chicago Press, 2003).

Ronald L. Numbers, ed., *Galileo Goes to Jail and Other Myths about Science and Religion* (Harvard University Press, 2009).

John Hedley Brooke and Ronald L. Numbers, eds., *Science and Religion around the World* (Oxford University Press, 2011).

For additional readings, go to "My UW."