

**Medical Science, Faith & Ethics  
Practicum at U.W.**

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## Abstract

Funding from the Center for Theology and Natural Sciences (CTNS) allowed us to offer a course through the medical school entitled “Medical Science, Faith, and Ethics Practicum”.

The course objective was to study the relationship between medical science, faith, and ethics from a variety of religious and scientific perspectives to enhance dialogue about the interface of science and religion.

We introduced participants to the interface of religion, science, and ethics through lectures, reading assignments, and experiential learning on the following topics: 1) neurobiology and concepts of mind and soul (e.g. intraoperative open brain stimulation), 2) artificial reproductive technologies, 3) medical genetics and stem cell research, 4) end-of-life care, 5) organ procurement and transplantation.

Over a year, multidisciplinary faculty and students met for five 1/2 day “practicums” to exchange scientific, ethical, and faith perspectives. Speakers from science and faith traditions were featured to orient the group to scientific and religious vantage points. With the reading assignments and lectures as a foundation, students and faculty broke into small groups for round table discussions of “real-world” cases and films of the actual medical environments.

Internationally renowned scholars participated, and the small group discussions allowed students a chance for sustained engagement with medical and faith leaders.

Also students were required to explore a religious tradition other than their own by attending a service, reading selections from the canon, and researching the tradition’s perspectives on medicine. In this presentation, details of the course will be presented including the syllabus constructed, the success and failures of the endeavor, and why we believe this “practicum” approach to the real world of medical activity has great potential to enrich communication between medical science and faith/value traditions.

## Introduction

It is almost axomatic that there here is great division and lack of the post-modern world between science and religion. Most philosophers, theologians, and ethicists have taken little in the way of the science instruction in college, or even high school. Thus science and medicine may appear threatening to them thereby implicitly discouraging reflection on scientific values and practice. Likewise, most scientists have been exposed to faith communities but that exposure barely exceeds what is experienced as a child, and often does not involve the discipline of ethical and religious reflection. Perhaps the greatest need for better dialogue is between the faith and value disciplines and health science disciplines. Scientific medical endeavors are value-laden and yet biomedical scientists themselves often take for granted the values that support their research. Likewise, leaders in faith and value traditions often offer moral guidance with regard to scientific and medical advances, while they have little (or no) practical knowledge of the science on medical practice itself. We hypothesized that while dialogue is important in improving the relationship between medical science and religion, it is likely to be most fruitful if it is accompanied by actual exposure to the working worlds of each area.

## Methods

1. Proposal submitted to CTNS\*, funding approved 2003
2. Recruited interested university and community leaders to participate in “practicums’ (Figure 1)
3. Launched university/community-wide lecture by international authority on religion/science interface
4. Developed 5 “practicums”
5. Recruited biomedical students to register and developed formal course
6. Evaluated results

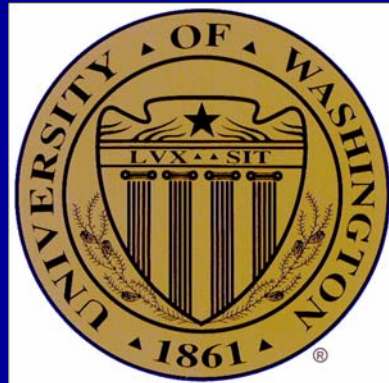
\*CTNS: Center for Theology and Natural Sciences  
University of California, Berkeley

Figure 1: “Flyer”for Recruitment of Faculty

**Program to Increase  
Interdisciplinary  
Dialogue Between  
Medical Science &  
Faith/Value Traditions**

**The Big Questions  
of Life**

1. Where did we come from?
2. Who are we?
3. What should we do while we are here?
4. What will happen to us after we die?
5. Can (should) we ask these questions?



## Results

1. A large number of faculty expressed interest and agreed to place their names on a planning committee member list. A large but lesser number of faculty attended a 3-hour orientation session (Table I A & B).
2. A university-wide lecture by an expert in the religion/science interface was a great success. (Figure II).
3. A formal semester seminar course (MHE-547) was developed for 2005 and students registered and the maximum allowed number of students registered. (Figure III and IV).
4. Five core “practicums” were developed and conducted in 2005 -1/2 day with lectures, videos, and small discussion groups. (Figure V and VI)

## Table I A: Faculty agreeing to be on planning committee and participate in orientation session

William Bremner, MD, PhD	Professor & Chair, Department of Medicine, UW Medicine
Dan Bridge, Rabbi	Executive Director, Hillel Foundation for Campus Life
Wylie Burke, MD, PhD	Professor & Chair, Medical History & Ethics, UW Medicine
William Calvin, PhD	Affiliate Professor, Psychiatry & Behavioral Sciences, UW
Gary Chamberlain	Theology & Religious Studies, Seattle University
David Dale, MD	Professor, Medicine/General Internal Medicine, UW
Kerry Dearborn, PhD	Assistant Professor of Theology, Dean of Chapel, Seattle Pacific University
Tim Dearborn, PhD	Assistant Professor of Theology, Dean of Chapel, Seattle Pacific University
Douglas Diekema, MD, PhD	Associate professor, Pediatrics, UW Medicine
Denise Dudzinski, PhD	Medical History & Ethics, UW Medicine
Neil Elgee, MD	President, Ernest Becker Foundation, UW Medicine
Cindy Fitch	Biology, Seattle Pacific University
William Foege, MD	professor Emeritus, International Health, Emory University & Fellow, Gates Foundation
Lorin Gardiner, MD	Acting Instructor, Psychiatry & Behavioral Sciences, UW
George Gates, MD	Professor, Otolaryngology, UW Medicine
John Gienapp, PhD, M.Div.	Director, Office of Grad.Med.Ed. Prog. Assess. & Dev., UW Medicine
George Grant, M.Div.	Chaplain Services, Harborview Medical Center
Benjamin Greer, MD	Professor/Director Obstetrics & Gynecology, UW Medicine
Leland Hartwell, MD	President & Director, Fred Hutchinson Cancer Research Center
Suzanne Holland, PhD	Chair/Associate Prof. of Religious/Social Ethics, University of Puget Sound
Leroy Hood, MD	President, Institute for Systems Biology
Albert Jonsen, PhD	Professor Emeritus, Medical History & Ethics, UW
Mary-Claire King, PhD	Professor, Division of Medical Genetics, UW Medicine
Stephen King, PhD	Director, Pastoral Counseling, Seattle Cancer Care Alliance
Christopher Kuhr, MD	Assistant Professor, Surgery/urology/Transplantation, UW Medicine
Paul Lange, MD, FACS	Professor, Department of Urology, UW Medicine
Eric Larson, MD, FACP, MPH	Director, Center for Health Studies, Group Health/Permanente
Randy Maddox, PhD	Paul T. Walls Professor of Wesleyan Theology, Seattle Pacific University
Thomas McCormick, D.Min	Senior Lecturer Emeritus, Medical History & Ethics, UW Medicine
John Medina	CEO, Talaris, Center for Mind, Brain and Learning
Richard Molteni, MD	Vice President & Med. Director, Children's Hospital & Regional Med. Cntr
George Ojemann, MD	Professor, Neurological Surgery, UW Medicine
Maynard Olson, PhD	Director, Genomic Sequencing Center, UW Medicine
Earl Palmer, M. Div.	Senior Pastor, University Presbyterian Church
Jamal Raman	Pastor, Interfaith Community Church
Michael Soules, MD	Prof. of Obstetrics/Gynecology, Director, Reproductive Endocrinology Clinic

## Table I B: Faculty agreeing to lecture in practicums

Thomas Benedetti, MD	Professor, Obstetrics & Gynecology, UW Medicine
Wylie Burke, MD, PhD	Professor & Chair, Medical History & Ethics, UW Medicine
Denise Dudzinski, PhD	Medical History & Ethics, UW Medicine
Stuart Farber, MD	Associate professor, Family Medicine, UW Medicine
George Grant, M.Div.	Chaplain Services, Harborview Medical Center
Suzanne Holland, PhD	Chair/Associate Prof. of Religious/Social Ethics, University of Puget Sound
Christopher Kuhr, MD	Assistant Professor, Surgery/urology/Transplantation, UW Medicine
Paul Lange, MD, FACS	Professor and Chair, Department of Urology, UW Medicine
Randy Maddox, PhD	Paul T. Walls Professor of Wesleyan Theology, Seattle Pacific University
Thomas McCormick, D.Min	Senior Lecturer Emeritus, Medical History & Ethics, UW Medicine
John Medina PhD	CEO, Talaris, Center for Mind, Brain and Learning
Richard Molteni, MD	Vice President & Med. Director, Children's Hospital & Regional Med. Cntr
George Ojemann, MD	Professor, Neurological Surgery, UW Medicine
Earl Palmer, M. Div.	Senior Pastor, University Presbyterian Church
Michael Soules, MD	Prof. of Obstetrics/Gynecology, Director Reproductive Endocrinology Clinic
Don Tinker	Director: Buddhist Support for the End of Life Committee
David Woodrum, MD	Professor of Pediatrics, Division of Neonatology, UW Medicine



## Figure II: UW/Seattle wide lecture by science/religion expert.



QuickTime™ and a  
TIFF (LZW) decompressor  
are needed to see this picture.

Figure 3: Descriptions of course for students (MHE 554: MedicaScience, Faith, and Ethic Practicum)

## Students

- MD/PhD students
- Undergrads in humanities and sciences
- Masters in bioethics
- Public health genetics grad students
- Undergraduate nursing students

## Assignments

- Attend introductory & concluding meetings
- Attend & actively participate in ALL 5 half day sessions
- Attend a religious service of a tradition other than their own, read sections of the canon, & research the tradition's response to and engagement in medical science.

## Course objectives

- Be introduced to literature in religion & science.
- Study the relationship between medical science, faith, and ethics from a variety of religious & scientific perspectives.
- Examine the ways one's own faith and values influence scientific exploration.
- 3 short writing assignments:
  - - Scholarly paper exploring specific topic (e.g. stem cell research) from the perspective of one faith tradition. (5-7 pgs)
  - - *Credo* (I believe) describing how your faith & values influence your perspective on a topic in medical science.
  - - Final assignment designed by student: paper, art, performance, ritual presentations.

# Figure IV: Course text and reference databases

## Course Texts & References/Databases

*Course Texts.* ## indicates available for purchase at South Campus Bookstore. @@ indicates text is on Reserve at Health Science Library.

1. Selected readings on Electronic Reserves or on course website – readings will be posted at least a week before each class session.
2. *Buddhism and Science* (available online through UW library)
3. ##*Bridging Science and Religion*. Ed by Ted Peters & Gaymon Bennett. First Fortress Press, 2003. @@
4. ##*Science & Religion: An Introduction* by Alister E. McGrath. Malden, MA: Blackwell Publishing, 2003.
5. ##*Death and Bereavement Around the World, Vol. 1 Major Religious Traditions*. Ed. by John D. Morgan and Pittu Laungani. Baywood Publishing Company: Amityville, NY 2002. @@

Other secondary sources available at UW libraries (@@ indicates on reserve):

1. *Science and Religion* by Ranganathananda, Swami. Calcutta: Advaita Ashrama, 1978. @@
2. *Creationism on Trial: Evolution & God at Little Rock* by Langdon Gilkey Langdon, Charlottesville: University Press of Virginia, 1998. @@
3. *How to Be a Perfect Stranger: A Guide to Etiquette in Other People's Religious Ceremonies*. Ed by Arthur J. Magida. Woodstock, Vt: Jewish Lights Pub, 1996. Odegaard Reference -- available in library only.

*Religion & Science References/Databases:*

1. Counterbalance: [www.counterbalance.org](http://www.counterbalance.org)
2. [http://www.metanexus.net/metaneexus\\_online/index.asp](http://www.metanexus.net/metaneexus_online/index.asp)
3. Center for Theology and Natural Science: [www.ctns.org](http://www.ctns.org)
4. <http://people.bu.edu/wwildman/WeirdWildWeb/>
5. Glossary of theological terms: [www.atf.org](http://www.atf.org) (esp. Christian traditions)
6. Encyclopedia: <http://www.ctns.org/encyclopaedia.html>
7. [www.meta-library.net/mdxbib/index-frame.html](http://www.meta-library.net/mdxbib/index-frame.html)
8. National Institute of Judaism & Medicine. [www.nijm.org](http://www.nijm.org)
9. [www.science-spirit.org](http://www.science-spirit.org)
10. [www.thearda.com](http://www.thearda.com) The American Religion Data Archive
11. Vanderbilt and Harvard have Divinity Schools with reference databases and links, some

## Figure IV: Syllabus (Full syllabus available upon request)

This course is designed to facilitate interdisciplinary discussion of the intersection of faith, values, and medical science. It is supported by a fellowship through the Center for Theology and Natural Sciences. The course consists of five core practicum seminars, each a half-day long, as well as other meetings and activities held over the course of three quarters in the 2004-2005 academic year (A,W,S). Students are required to complete all three quarters and will be offered the option to take the class for a grade or a C/NC. The seminars offer interdisciplinary instruction and dialogue with prominent medical scientists, ethicists, theologians, and leaders of faith communities on topics including:

- genetics including stem cell research and cloning
- ethical issues in transplantation
- ethical issues in neuroscience
- reproductive technology
- end of life care

## Figure V: Brief description of practicums

### Mind/Brain Practicum

(01/14/05)

- “Lessons from molecular neuropsychiatry: the biochemical basis of human behavior” (J. Medina, PhD)
- Case studies in small groups
  - Phineas Gage
  - Near death experiences & the temporal lobe
- “Lessons from the surgical suite: conscious brain stimulations, etc” (G. Ojemann, MD)-lecture and videos
- “Evangelical & Buddhist Views” Mind and Soul “(E. Palmer, M. Div. & D. Tinker)

### Transplant Ethics Practicum

(03/04/05)

- Video/lecture on living and cadaveric kidney transplantation (C. Kuhr, MD)
- Small group discussions, surrogate consent for living donor kidney transplants
- Group discussion of “A new liver for a prisoner” *Hastings Center Report* 2002 32:4, 12.

### Genetics/Molecular Biology Practicum

(02/25/08)

- “Evolution & Creation: the range of Christian Stances & Concerns” (R. Maddox)
- Genetic Testing: medical, ethical, & counseling issues (W. Burke M.D & R. Bennett, MD)
- Small group case studies\* :
  - HD, Tay-Sachs
- Large group discussion of cases/ Q & A with religion & ethics faculty

\* A one day “immersion” course and laboratory in molecular biology was conducted for selected theologians and ethicists

## Figure VI: Brief description of practicums

### ART/Stem Cells/Cloning (04/01/05)

- “The science & art of ART” (M. Soules, MD) lecture and videos
- “The ethical and theological implications of stem cell research and reproductive cloning” (S. Holland, PhD)
- Case studies in small groups
  - Film *Clone!*
  - ART for family “balance” – parents want boy because they already have 2 girls using PGD

### End-of-Life Practicum (05/06/05)

- “Medical Management of Dying Patients” (S. Farber, MD)
- “Spiritual Care of Dying Patients” (G. Grant, M. Div, et al.)
- “Explanations of JW & Christian Science refusals for med care” (T. McCormick, D.Min)
- Case studies in small groups
  - Terminal sedation for existential suffering
  - Refusal of life-sustaining treatment on religious grounds

## Conclusions:

- There is a great interest among faculty and students at a secular medical school to discuss issues relating to the science/religion/ethics interface.
- An approach where medical faculty demonstrate and faith and value leaders react to actual biomedical practices and issues have great merit.
  - time consuming
  - “live” demonstrations too complex, videos suffice
  - it is hard for famous medical faculty to “make time”.
- Approach of great value to biomedical students and faculty. They are hungry for meaning and value.
  - “International renown regional medical scholars participated and learned in the sessions outside their thus modeling their commitment to religion/science dialogue with students. The students enjoy a rare opportunity to engage with scholars whose work they have read but whom they have never otherwise had a chance to study with. The intimacy of small group discussions allows students a chance for sustaining engagement with several scholars and leaders of faith communities - an opportunity to that we have not seen in traditional classroom settings”\*

\*Summary statement of faculty and students in assessing value of this course