



MACQUARIE CHRISTIAN STUDIES INSTITUTE APPROVED UNIT OUTLINE

1. Unit Code and Title:

MCSI 870 [IN720] Science and the Christian Faith

2. Credit Points:

3 credit points

3. Name of Unit Convenor and Key Teacher/s:

Dr Frank Stootman

B.Sc.(Hons), Dip.Ed(Tertiary)(STC), Ph.D

Associate Professor - Physics, School of Computing & Information Technology,
University of Western Sydney

Director, Adolon Computer Services Pty. Ltd.

Director, L'AbriFellowship (Australia) Ltd.

Mr Ron Winestock, B.Econ., M.A. University of Sydney

Director, Vinitex Ltd.

Sessional Lecturer, Macquarie Christian Studies Institute

4. Unit Description / Calendar Entry:

This unit develops Christian perspectives on contemporary society and equips students with integrative analysis of specific academic disciplines. It seeks to promote both of these objectives by undertaking systematic, scholarly reflection on the relationship between theology and science. By exploring the history of the scientific revolution, it lays the groundwork for discussions about limits to the scientific project, and therefore, whether the Christian world view still has some room to manoeuvre. It considers whether the Christian world view is incompatible with the advances of science or simply incompatible with the scientific world view.

5. Alignment with the MCSI Vision:

This unit assists students in the development of thoughtful Christian perspectives on contemporary society and of integrative analysis of specific academic disciplines through undertaking systematic, scholarly reflection on the relationship between theology and science.

6. Pre-requisites / Co-requisites / Exclusions:

MCSI 270/370 [IN 342] *Science & Christian Belief*; PE427 *Science & Religion* (or equivalent units)

7. Unit Objectives:

At the end of the unit, candidates should be able to:

1. Describe and reflect critically upon the historical, philosophical, methodological and sociological factors which influence the relationship between science and religion;
2. Identify a number of different approaches to relating and science and religion, and evaluate their strengths and weaknesses;
3. Assess the role of beliefs and faith commitments in shaping theological and scientific viewpoints on the nature of reality and undertake critical reflection shaped by informed perspectives on scientific theories and Christian theology on specific issues;
4. Compare and contrast theological themes and perspectives with the insights of scientific theory and practice and evaluate areas of consonance and dissonance between scientific and religious perspectives.

8. Unit Content /Lecture Topics

- a) **History and Theory of the Dialogue between Science and Religion**
 - i) Modernism: Definition and role of scientific revolution in creating modernism. Science as “objective” and “unbiased”. The role of Protestant Christianity in promoting individualism and removing restrictions to the development of science.
 - ii) The First Scientific Revolution: the path to naturalism and reductionism. Discoveries of Galileo, Copernicus, Newton and others that challenged literalist biblical views...
 - iii) The Second Scientific Revolution: Relativity & Quantum Theory opened mechanistic science to metaphysical/theological views.
 - iv) The Third Scientific Revolution: Chaos Theory. Gödel’s theorem showed limitations of deductive certainty and further opened science to metaphysical/theological issues.
 - v) Modern Cosmology: The world view presented by the Second Scientific Revolution. Monistic view prevails, challenges Trinitarian views, and lays foundation for New Age.
 - vi) Dialogue: Current debate between science and religion. Significance of the evolution vs creation issue.
- b) **Case Studies in the Dialogue between Science and Religion**
 - i) Emergent Properties: Can the “softer sciences” be built from physics (a cornerstone of the naturalist world view). Case studies in Molecular Biology.
 - ii) Biology: The “ghost in the machine” --- the relationship between mind, body, and soul examined from the orthodoxies of logical positivism, behaviourism, neo-Darwinianism, and Christianity. Implications for genetic science and genetic engineering.
 - iii) Psychology: Mind, soul and the role of science. Biblical views of humanity reveal knowledge not accessible to psychology.
 - iv) Environmental Science and Human Responsibility: a Christian Perspective

- c) **Christian and Scientific Worldviews**
 - i) God and the Modern Scientific Worldview.
 - ii) Proposing a Christian World view.

9. Assessment:

Tutorial presentation and leadership accompanied by 2,000 word summary paper (20%)

One hour exam assessing Outcomes 1 & 2 (15%)

One hour exam assessing Outcome 3 (15%)

Major research essay assessing Outcome 4 (4,000 words) (50%)

10. Details of Presentation:

This unit may be offered in

- a. standard format of 2 hours class contact per week over 13 weeks. Lectures comprise 70% of the class contact. The remaining 30% of class contact involves student participation in seminars, presentations, student-led case studies, tutorials, reading and reflection exercises, and audio/video components.
- b. intensive format. 500 pages of pre-reading. 26 hours of class contact over 10 weeks. Week 1: 4 days @ 2.5 hours per day; Week 2: 4 days @ 2.5 hours per day; Week 6: one day of 6 hours. One hour exam based on readings for first half of unit is given at the end of Week 2. One hour exam based on readings for second half of unit is given in Week 6. Research essay is due in Week 10. Lectures comprise 70% of the class contact. The remaining 30% of class contact involves student participation in seminars, presentations, student-led case studies, tutorials, reading and reflection exercises, and audio/video components. Presentations are due in Week 6
- c. NOT APPROVED UNTIL COMMITTEE VIEWS CONTENT distance (online) mode. Thirteen sets of weekly lectures and resource materials are available online. The material includes questions and discussion guides on all lecture materials. Students are required to respond every week to these questions and discussion guides. All students are required to attend a one-day on-campus session at a date negotiated at the beginning of the unit. This day is usually about Week 6.

11. Bibliography:

Barbour, I. G., *When Science Meets Religion. Enemies, Strangers or Partners?* San Francisco: Harper San Francisco, 2000

Burt, E.A., *The Metaphysical Foundations of Modern Science*, N.J. Humanities Press, 1996

Chappel, Dorothy F. & E David Cook. *Not Just Science: Questions Where Christian Faith and Nature Science Intersect*. Zondervan 2005

Coyne, George V. & Alessandro Omizzolo *Wayfarers in the Cosmos: The Human Quest for Meaning*. Crossroad 2002

Deutsch, D., *The Fabric of Reality*. Penguin 1997

Peat, F. David. *From Certainty to Uncertainty: The Story of Science and Ideas in the Twentieth Century*. Joseph Henry Press 2006

McGrath, Alister E. *Science and Religion: An Introduction*. Oxford: Blackwell 1998

Polkinghorne, J & M Welker, *The End of the World and the Ends of God: Science and Theology on Eschatology* Trinity Press International 2000
Polkinghorne, J., *Exploring Reality: The Intertwining of Science and Religion*. Yale Uni Press 2005
Proctor, J.D., *Science, Religion, and the Human Experience*. Oxford Uni Press 2005
Rae, A., *Quantum Physics: Illusion or Reality? (2nd edition)* Cambridge University Press 2004
Stannard, R., *Science and the Renewal of Belief*. Templeton Foundation Press 2004