

**S xxx Only Wonder Comprehends
Syllabus**

The Athenaeum of Ohio-Mount Saint Mary's Seminary

Spring 2017

Thursday evenings, 7:00-9:40 PM, 2 credits

Course Description: *Only wonder comprehends - Gregory of Nyssa* The experience of empathy and the shared experience of a desire for beauty, truth, and wonder can serve as a starting point for dialogue between faith and science and between the Christian faithful and scientists. The course will seek to overcome pre-conceived conflictual and ideological positions between the theological and scientific disciplines. Beginning with the theological discipline and method, the course will examine beauty in Christian experience, scripture, and in the Church. The experience of beauty and mystery are a way of “knowing” and understanding the world, the cosmos. Science employs a different methodology from Catholic theology. Can a Catholic be a true scientist and can a scientist be truly Catholic? The course attempts to answer that question through an examination of the life of Gregor Mendel and Jerome Lejeune, both of whom made significant contributions in the field of genetics, remained committed to his faith, and were changed, or rather, awed, by their discoveries. The scientific method employed by these and other scientists is distinct from the ideology of scientism. By authentically employing the scientific method, the scientist is not merely neutral but is an active participant in the adventure of knowing and discovering what is beautiful; the experience of discovery draws the scientist closer to the mystery of nature and Mystery. The course will study the mystery of the origins of life, beginning with the Big Bang, including a discussion of the evolution of life and concluding with a discussion of the “end of our earth”. If there is a discussion of the beginning and end of life at a global or universal level, then there can be a corresponding exploration at the level of the individual through an examination of the anatomy of the brain to better understand brain function and the experience of beauty, while providing insight into the difficulty of determining death, itself a mystery, at the end of life. The mystery of the end of life will also be examined through the lens of theology, recalling that for the faithful Christian “life is changed not ended.” The scientist and the theologian use particular methods which lead them to a common experience of awe and wonder in the presence of the mystery of life.

Instructors:

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Guest Lecturers

Giorgio Ambrosio, Ph.D. (Tel: 630-840-2297); email: giorgio_ambrosio@hotmail.com.

Mark Basik, M.D. (Tel: 514-340-8222 ext 8248); email: markbasik@gmail.com.

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Course Goals:

1. To understand scientific research as an ongoing struggle and search for truth similar to theology inquiry by writing a paper examining a particular scientist's research and sharing the findings in class.
2. To discover the convergence of science and theology through an increase in knowledge of the hard sciences, evaluated through pre and post-testing.
3. To engage youth through video and poster presentations in classrooms and/or science fairs- by presenting science as a process that enriches one's own experience of beauty.
4. To improve preaching and homiletic skills by incorporating insights and imagery from science and nature.
5. To cultivate interest in the larger community by promoting and hosting a public lecture to be given by an expert in the field of science.

Outline of Course:

1. Only Wonder Knows- A Theology of Beauty in the Christian experience, Scripture, and the life of the Church.
2. The Catholic Scientist? - Can a Catholic be a true scientist and can a scientist be Catholic? - Genetics and Geneticists: Gregor Mendel and Jerome Lejeune
3. Science versus Scientism – What is the scientific method really? What ideologies influence science? What are the similarities and differences with theological method?
4. The Science of Life- The Big Bang Theory and the “Rare Earth” – the Wonder of Science
5. The Evolution of Life: From “In the beginning” to the Apocalypse – Wonder in Life and Death
6. From life to human persons- The neuro-anatomy of the brain and the substrate of consciousness: the end of life and beyond

Bibliography:

*Barres de Alameida, Ulisses and Juan Rojo. *Science, Reason, and Truth: Proceedings of the San Marino Symposium*. *Euresis Journal* 5 (2013). Milan: Associazione Euresis

Benedict XVI. *A Reason Open to God: On Universities, Education, and Culture*. Washington, D.C: Catholic University of America Press, 2013.

Furton, Edward. *What Is Man, O Lord?: The Human Person in a Biotech Age. Proceedings of the Eighteenth Bishops' Workshop*. Boston: National Catholic Bioethics Center, 2002.

Henig, Robin M. *The monk in the garden: the lost and found genius of Gregor Mendel, the father of genetics*. Boston: Houghton Mifflin, pp. 304.

Lancellotti, Carlo. "Science, contemplation, and ideology," in the *World and Christian Imagination*. Waco, TX: Baylor University, 2006.

*Lejeune, Clara. *Life Is a Blessing: A Biography of Jerome Lejeune, Geneticist, Doctor, Father*. San Francisco: Ignatius Press, 2000.

*Navone, John. *Enjoying God's Beauty*. Collegeville, MN: Liturgical Press, 1999.

Sobiech, Frank. "Science, Ethos, and Transcendence in the Anatomy of Nicolaus Steno," *National Catholic Bioethics Quarterly*. Spring 2015, Vol. 15 Issue 1, p. 107-126.

*Ward, Peter D. and Brownlee, David. *Rare Earth: Why Complex Life is Uncommon in the Universe*. New York: Copernicus Books, 2000.

* Indicates required reading. Additional texts will be available on the course page, which can be found on the Athenaeum website.

Evaluation:**Class Participation** (10 %)

This includes attendance, attention, reading, and participation in classroom discussion.

Paper (20 %)

Students will be asked to read a biography of a Catholic scientist; to give an in-class presentation during week 4 of the course on the scientist's contribution; and to compose a five page paper, highlighting the interplay between the scientist's Catholic beliefs and commitment to the scientific endeavor. The paper will be due the following week.

Homily (20 %) Students will be asked to take pick readings from the Sunday lectionary and to compose a homily incorporating the science from the course into the homily. The text of the homily must be submitted by week 8 of the course. The preaching lab will be used by

students to give the homily in front of a small audience, who will evaluate the homily.

High School Engagement (20 %) Students will arrange visits to Archbishop McNicholas High School's science classes to give a lecture and/or presentation (using a variety of media) on some subject from the course.

Pre and Post-Testing (30 %) Students will be given pre and post-tests (as indicated on the syllabus) throughout the course. The pre-test is designed to determine what the student knows prior to the lecture. At the conclusion of a series of lectures, students will be given a test to evaluate student learning and retention of the hard sciences presented.

This syllabus is subject to revision at the professors' discretion.

Proposed Schedule

Week 1 Only Wonder Comprehends – Fr. Fernandes and Dr. Caggioni – Introduction to the Course and Review of the Syllabus – the Christian Experience of Beauty; *Readings*: Navone, pp. 3-37

Week 2 Only Wonder Comprehends – Fr. Fernandes - Beauty in Scripture and the Church; *Readings*: Navone, 43-134. Pre-Test - Genetics

Week 3 The Catholic Scientist? An examination of the contribution to the field of genetics of Gregor Mendel and Jerome Lejeune – Dr. Ombretta Salvucci and Dr. Mark Basik. *Readings*: During weeks 3-4 students will read excerpts from Henig, Lejeune, and Sobiech.

Week 4 Students will take a post-test on genetics and will give in-class presentations on Catholic scientists whom they have researched. A pre-test will also be given for the next lecture on the scientific method. *Readings*: Lancellotti, Ward – These will be used over the next four weeks of the course. Professors will assign selections to be read from *Euresis*.

Week 5 Scientific Method versus Scientism – Dr. Giorgio Ambrosio; *Readings*: Lancellotti; Dr. Caggioni – Rare Earth Exhibit. **Papers due today.**

Week 6 Post-Test on Scientific Method; Dr. Caggioni - Discussion of the Rare Earth Exhibit – Pre-test on Evolution

Week 7: The Evolution of Life: From the Big Bang to the Apocalypse – Dr. Ambrosio and Dr. Caggioni

Week 8: Post-test on Evolution and Rare Earth; **Draft Text of Homily Due**; Evolution Wrap-Up; Neuro-anatomy Pre-Test

Week 9: Who am I? Where am I? – Neuroanatomy: the Brain, the Substrate of Human Consciousness – Dr. Ferioli/Dr. Broderick; *Readings*: These will appear on the course page.

Week 10: End of Life Panel Discussion – Dr. Ferioli Fr. Fernandes; Neuro-anatomy Post-Test; Conclusion of the Course; Course Evaluations

Students are required to complete the “High School Engagement” Project and the “Homily” assignment during the fifteen week semester. These assignments do not need to be completed during the specific ten weeks of the course. Only when students complete all the assignments will a grade be assigned. Students who *fail* to complete the assignment by the end of the semester will be given an incomplete. Failure to complete the assignments within two weeks of the end of the semester will result in failure.