FOOD, GLORIOUS FOOD

It’s not every day that a seminary can offer a course on food and faith.

Immaculate Conception Seminary in South Orange, New Jersey, is able to pull it off because of a felicitous combination: the presence of chemistry professor Rev. Gerald J. Buonopane, who holds a Ph.D. in food science from Penn State University, and the seminary’s active affiliation with Seton Hall University, where the legacy of Fr. Stanley Jaki, O.S.B., anchors a longstanding commitment to science. Jaki, a highly respected astrophysicist and theologian, was the 1987 recipient of the Templeton Prize.

A year ago, the seminary, in collaboration with the university, hosted Fr. Leo Patalinghug, author of Epic Food Fight: A Bite-Sized History of Salvation. He not only lectured to an audience of seminarians and other students, but also provided a cooking demonstration on “Grace Before Meals,” a movement to bring families back to the dinner table.

Encouraged by the response to the Patalinghug lecture and the potential for continued collaboration between the seminary and the university, Buonopane submitted a proposal for a full-fledged three-credit course. Seminary rector Monsignor Joseph Reilly, along with seminary and chemistry faculty at Seton Hall, greenlighted the project. We did, too.

“To be well-rounded priests, seminarians need to be competent in both theology and science, able to embrace their mutual dependency,” Buonopane says. “Particularly in a world that is ever increasing in science and technology, a priest needs to have a strong understanding of the relationship between food science and faith to optimize his effectiveness as a pastoral minister and homilist.”

With a grant from us in hand, Fr. Buonopane will kick off the course (CHEM 3550 / CORE 3252 / THEO 3515) with a reflection on a question posed by Duke University’s Norman Wizba in his book, Food and Faith: A Theology of Eating: “Why did God create a world in which every living creature must eat?” An invitation to Professor Wizba as a guest lecturer is in the works.

The course has generated buzz at the seminary and on the Seton Hall campus, with 40 students enrolled, including a dozen or so seminarians. Through the course, all will gain a comprehensive and integrative view of food from scientific, theological, cultural, and ethical dimensions, covering such topics as metabolism, special diets, eating disorders, theologies and practices of food in biblical times, food taboos in religious practice, feasting and fasting, Shabbat, and, of course, the Eucharist as sacred meal.

Buonopane thinks students will be prepared to “develop working strategies to improve ‘feeding the poor and hungry’ [beyond] ‘starting a parish food pantry.’” The success of the course will be measured by a long-term goal: the professor’s hope is that at least a few students will contribute to something larger — perhaps an end to the crushing imbalance of a system in which 30 percent of all food is thrown away while so many others go hungry. Only then will the plea of many — echoing Oliver and his ragamuffin mates in a London workhouse — for food, glorious, nutritious, life-sustaining food, be answered.

WHAT’S INSIDE?
1. NEW COURSE: FOOD & FAITH
2. BEST PRACTICES FOR SCIENCE COURSES IN SEMINARIES
3. ESSAY PRIZE WINNING PROGRAM BRINGS VITAL PREGNATAL CARE TO PARISHIONERS
4-5. FORTY-ONE SCIENCE COURSES + 8
6. MEET FIVE SCIENTIST-SEMINARIANS
7. SPEAKING THE LANGUAGE OF THE TIMES
Faculty who received course development grants to create new seminary courses in the sciences were asked, after teaching their courses for the first time, “what are some ‘best practices’ that you would identify?” From their insights, we have identified and collected eight common themes of “best practices.” Here, we share a few faculty insights about one of these best practices:

**“CALL IN THE EXPERTS.”**

One of the most consistent themes across faculty respondents was the importance of bringing in experts in science who can engage students and faculty alike on new topics.

Among the many invited scientist experts in these courses were Br. Guy Consolmagno, S.J., Ph.D., Director of the Vatican Observatory, who gave lectures on cosmology and the faith lives of scientists at the Olate School of Theology and The Athenaeum/Mount St. Mary’s Seminary of the West (see photo); William Newsome, Ph.D., Director of the Neurosciences Institute at Stanford University; Christian Smith, Ph.D., sociologist and Director of the Center for the Study of Religion and Society at the University of Notre Dame; and Michelle Francl, Ph.D., Professor of Chemistry at Bryn Mawr College and Adjunct Scholar at the Vatican Observatory, who spoke at Mt. St. Mary’s Seminary about doing science as a person of faith.

Several faculty members built on the effectiveness of their guest experts by sponsoring conferences, faculty book discussion groups, and programs open to the general public. Fr. Christopher Renz, O.P., of the Dominican School of Philosophy and Theology sponsored a conference on the anthropology of the human person to accompany his grant-funded liturgy course. The conference included experts — Agustín Fuentes among them — in evolutionary anthropology, philosophy, and theology.

While most seminaries engaged experts in traditional lecture programs, a few engaged scientists as integral parts of the courses themselves. As Dr. Christopher Baglow at Notre Dame Seminary states, “having actual scientists in the classroom was indispensable.” Dr. Christopher Anadale of Mt. St. Mary’s Seminary agrees strongly on the need for guest experts: “on my own I lack sufficient scientific

(continued on next page )
ESSAY PRIZE WINNING PROGRAM BRINGS VITAL PRENATAL CARE TO PARISHIONERS

MODELS CLASSROOM THEORY AND ON-THE-GROUND PRAXIS

In less than a minute, Fr. Augustine (“Gus”) Puleo realized he had a story to write. A notice posted at St. Charles Borromeo Seminary caught his attention. We were looking for seminary faculty and students to tell about a scientific discovery, advance, event, or issue that had an impact on their ministry.

Puleo, an adjunct professor of Pastoral Spanish at the seminary, is also the pastor of St. Patrick’s Church in Norristown, Pennsylvania. The parish is vibrant, mostly Latino, with immigrant families from Mexico, Colombia, the Dominican Republic, and other countries. There are three Masses each Sunday at St. Patrick’s; some are standing room only. As further evidence of its unusual vitality, Puleo documented 267 baptisms in 2014.

But 2014 was also the year he presided at the funerals of five infants, each less than a day old. “I was resolved,” Puleo said, “not to bury any more babies.” Startled to learn that the mortality rate in the United States in 2013 was six infant deaths per 1,000 live births, Puleo gasped, “I have almost that many in my parish alone!”

He quickly learned that many of his pregnant parishioners were not receiving prenatal care that could have prevented many, maybe even all, of the infant deaths. He began studying medical research on pregnancy and infant mortality, becoming a quasi-expert on topics such as the importance of folic acid in pregnancy. The science on the matter was clear: these babies, and their families, needed better access to medical care, and a community effort was needed in order to ensure that they could get it.

Puleo and his team began exploring the idea of a community-based model of care, inspired by three programs: Partners in Health, which includes access to free primary health care and education in Haiti, Peru, Rwanda, and Lesotho; Creighton University’s Institute for Latin American Concern, where professionals train, manage, and provide supplies for activities in the Dominican Republic; and a program started by Dominican Sisters in Las Cruces, where they built a lab, pharmacy, and bakery.

Once Puleo and his team knew what they wanted to accomplish, they went in search of local partners to provide services. “I reached out to find help,” he writes.

Help arrived. Physicians, nurses, and researchers brought information and on-the-ground assistance. With their support, a volunteer contingent of seminarians from St. Charles and elsewhere, and many local Spanish-speaking community volunteers willing to champion the program, Puleo launched a monthly health clinic to provide health education, screenings, and referrals, training community health educators (Promotores de la Salud) to help parishioners navigate obstacles to regular care such as language barriers and lack of health insurance.

The St. Patrick program also has distributed “baby boxes,” loaded with helpful supplies, to many new and expecting parents. This cardboard box serves an additional important purpose — it’s safe for a baby to sleep in for the first six months. This program is modeled after the “baby box initiative,” a program popular in Finland since its inception in 1937, which has been responsible for a dramatic reduction of the infant mortality rate there and in other countries that have adopted it.

In his exceptional essay submitted to us, Fr. Puleo explored both the science and the practical work of providing health care access to the most vulnerable and marginalized members of our faith community — a true exploration of one way that faith and science work together to bring life and health to the Body of Christ.

(STUDYING SCIENCE IS AN ACT OF WORSHIP; IT’S AN ACT OF GETTING CLOSER TO THE CREATOR.

-Br. Guy Consolmagno, speaking at Mt. St. Mary’s Seminary of the West.)

expertise to take the class beyond a certain point with the science/philosophy/religion engagement.”

Dr. Cory Hayes of St. Joseph Seminary utilized grant funds to pay stipends to scientists who helped teach certain parts of course content. “They provided a level of expertise and a ‘first hand’ viewpoint regarding both theoretical knowledge and practical research experience that non-scientist instructors, i.e., philosophers and theologians, could not.” Dr. Edward Kaczuk and Fr. Michael Woost at Borromeo Seminary were fortunate to count several professional scientists among their enrolled students in the course, who “brought a wealth of scientific experience to the dialogue and, at the same, were enriched by the contributions coming from the fields of theology and spirituality.”
COURSES OFFERED IN SPRING 2016

The Transfigured Brain: The Relationship between Brain Science, Ritual and Mysticism
Saint Mary Seminary and Graduate School of Theology, Wickliffe, OH
Edward Kaczuk, Ph.D. Music Theory & Composition (Kent State University)
Rev. Michael G. Woost, S.T.L. Theology (Catholic University of America)

Creation and Science
Immaculate Conception Seminary, South Orange, NJ
Rev. Joseph R. Laracy, S.M. Engineering Systems (Massachusetts Institute of Technology), S.T.L. Theology (Pontifical Gregorian University)

COURSES OFFERED IN SPRING 2017

The Emergence of the Image: Human Evolution from Biological, Philosophical and Theological Perspectives
Notre Dame Seminary and Graduate School of Theology, New Orleans, LA
Christopher T. Baglow, Ph.D. Theology (Duquesne University)

Only Wonder Comprehends
Athenaeum of Ohio/Mount St. Mary’s Seminary of the West, Cincinnati, OH
Marco Caggioni, Ph.D. Physics (Harvard University)
Giorgio Ambrosio, Ph.D. Applied Science (at Fermilab, Chicago)
Deacon Tracy W. Jamison, Ph.D. Philosophy (University of Cincinnati)

Virtues, Vices and Addiction
St. John’s Seminary, Camarillo, CA
Rev. Luke Dysinger, O.S.B., D. Phil. Theology (Oxford University), M.D. (University of Southern California)

COURSE OFFERED IN SUMMER 2017

***Creation and Science
Immaculate Conception Seminary School of Theology, South Orange, NJ

COURSES OFFERED IN FALL 2017

Science and Theology of Food
Immaculate Conception Seminary School of Theology, South Orange, NJ
Rev. Gerald Buonopane, Ph.D. Food Science (Pennsylvania State University)

Cosmos and Creation: Perspectives on Scientific Discoveries and the Intelligibility of Human Experience
Saint Charles Borromeo Seminary, Wynnewood, PA
James Despres, Ph.D. (ABD) Philosophy (Catholic University of America)

**Theology of Marriage and Human Sexuality
St. John’s Seminary, Camarillo, CA

**THE TRANFIGURED BRAIN: THE RELATIONSHIP BETWEEN BRAIN SCIENCE, RITUAL AND MYSTICISM
Saint Mary Seminary and Graduate School of Theology, Wickliffe, OH

**CREATION AND SCIENCE
Immaculate Conception Seminary, South Orange, NJ

SCIENCE: A THEOLOGY OF CREATION
Mount Angel Seminary, St. Benedict, OR
Br. Louis de Montfort Nguyen, O.S.B., M.D. (University of California, Davis)

WHAT DOES SCIENCE PROVE? TOPICS AT THE INTERSECTION OF SCIENCE AND RELIGION
Borromeo Seminary, Wickliffe, OH
Beth Rath, Ph.D. Philosophy (St. Louis University)

HUMAN GENETICS AND BIOTECHNOLOGIES: CHALLENGES FOR SCIENCE AND RELIGION
Boston College School of Theology and Ministry, Chestnut Hill, MA
Rev. Andrea Vicini, S.J., M.D. (University of Bologna), Ph.D. Theological Ethics (Boston College)

LITURGICAL PIETY: ANTHROPOLOGICAL FOUNDATIONS OF CATHOLIC WORSHIP
Dominican School of Philosophy & Theology, Berkeley, CA
Rev. Christopher J. Renz, O.P., Ph.D. Microbiology-Immunology (Northwestern University), M.A. Theology (Graduate Theological Union, Berkeley, CA)

SCIENCE IN THE LIGHT OF FAITH
Holy Apostles College and Seminary, Cromwell, CT
Stacy Trasancos, Ph.D. Chemistry (Pennsylvania State University), M.A. Theology (Holy Apostles College and Seminary)

COURSES OFFERED IN FALL 2018 & SPRING 2019

ADDITIONAL EIGHT COURSES ARE SCHEDULED AFTER THE GRANT CLOSES IN FALL 2018 & SPRING 2019
Stress & Resiliency: Scientific and Pastoral Approaches  
St. Mary’s Seminary & University, Baltimore, MD  
Patricia Fosarelli, M.D. (University of Maryland School of Medicine), D.Min. Spirituality  
(Wesley Theological Seminary, Washington, D.C.)

Science and Theology: In Dialogue for the New Evangelization  
Kenrick-Glennon Seminary, St. Louis, MO  
Edward Hogan, Ph.D. Systematic Theology  
(Boston College)

***The Transfigured Brain: The Relationship between Brain Science, Ritual and Mysticism  
Saint Mary Seminary and Graduate School of Theology, Wickliffe, OH

Science, Faith and Knowledge  
St. Pius X Seminary, Dubuque, IA  
Jacob Kohlhaas, Ph.D. Theology  
(Duquesne University)  
Christoffer Lammer-Heindel, Ph.D. Philosophy  
(University of Iowa)

Theology and Scientific Methodology  
St. Vincent de Paul Regional Seminary, Boynton Beach, FL  
Antonio Lopez, Ph.D. Philosophy  
(Fordham University)

**Science: A Theology of Creation  
Mount Angel Seminary, St. Benedict, OR

**What Does Science Prove? Topics at the Intersection of Science and Religion  
Borromeo Seminary, Wickliffe, OH

What is a Human Being? Evolution’s Gift to Theology for Responding to this Question  
Saint John’s University School of Theology and Seminary, Collegeville, Minnesota  
Vincent M. Smiles, Ph.D. Theology  
(Fordham University)

Science and Forgiveness  
Sacred Heart Seminary and School of Theology, Hales Corners, WI  
James Stroud, S.T.D. Moral Theology and Ethics  
(Catholic University of America)  
Jeremy W. Blackwood, Ph.D. Religious Studies  
(Marquette University)  
Brian Yong Lee, Ph.D. Theology  
(University of Notre Dame)  
Patrick J. Russell, Ph.D. Religious Studies  
(Marquette University)

Can the Mind be Reduced the Brain?  
Dominican School of Philosophy and Theology, Berkeley, CA  
Marga Vega, Ph.D. (Universidad de Valladolid)

COURSES SCHEDULED FOR SPRING 2018

**Darwin and Naturalism  
Mount St. Mary’s Seminary, Emmitsburg, MD  
Christopher Anadale, Ph.D. Philosophy  
(Emary University)

**The Emergence of the Image: Human Evolution from Biological, Philosophical and Theological Perspectives  
Notre Dame Seminary and Graduate School of Theology, New Orleans, LA

Behavioral Ecology  
Bishop Simon Bruté College Seminary, Indianapolis, IN  
David Benson, Ph.D. Zoology  
(Washington State University)  
Mark Reasoner, Ph.D. New Testament & Early Christian Literature  
(University of Chicago)

Man and Woman He Created Them: What Science Tells Us about Gender  
Kenrick-Glennon Seminary, St. Louis, MO  
John D. Finley, Ph.D. Philosophy  
(University of Dallas)

**Integral Anthropology: Evolution in Dialogue with Catholic Theology and Philosophy  
St. Joseph Seminary College, St. Benedict, LA

Divine Action in the Natural World  
St. Joseph’s Seminary, Yonkers, NY  
Michael A. Hoonhout, Ph.D. Systematic Theology  
(Boston College)

**Fundamentals of Science at the Foundations of Faith  
University of Saint Mary of the Lake / Mundelein Seminary, Mundelein, IL

Cosmology: Scientific, Philosophical and Theological  
St. John Vianney Theological Seminary, Denver, CO  
Thomas McLaughlin, Ph.D. Philosophy  
(University of St. Thomas, Houston)  
Joel Barstad, Ph.D. Medieval Institute  
(University of Notre Dame)

In the Image of God: Toward an Adequate Anthropology of the Person as the Image of the Divine  
Mount Angel Seminary, St. Benedict, OR  
Br. Louis de Montfort Nguyen, O.S.B., M.D.  
(University of California, Davis)

COURSES SCHEDULED FOR FALL 2018

***Theology of Marriage and Human Sexuality  
St. John’s Seminary, Camarillo, CA

**Science in the Light of Faith  
Holy Apostles College and Seminary, Cromwell, CT

COURSES SCHEDULED FOR SPRING 2019

**Virtues, Vices and Addiction  
St. John’s Seminary, Camarillo, CA

***Statistics and the New Evangelization  
Mount St. Mary’s Seminary, Emmitsburg, MD

**Only Wonder Comprehends  
Athenæum of Ohio/Mount St. Mary’s Seminary of the West, Cincinnati, OH

**Human Genetics and Biotechnologies: Challenges for Science and Religion  
Boston College School of Theology and Ministry, Chestnut Hill, MA

COURSES SCHEDULED FOR EITHER FALL 2018 OR SPRING 2019

**Catholicism in an Evolving World  
Oblate School of Theology, San Antonio, TX

**Liturgical Piety: Anthropological Foundations of Catholic Worship  
Dominican School of Philosophy and Theology, Berkeley, CA

** course repeated second time  
*** course repeated third time
MEET FIVE SCIENTIST-SEMINARIANS

When it comes to the question of including science in seminary studies, scientist-seminarians need no convincing of its importance. Entering seminary only after completing degrees in the sciences, these seminarians understand better than most how important the sciences can be to priestly formation.

BR. MATTHEW GUMMESS, O. CARM.
B.A. in Physics and Philosophy, Yale University
M.A. in Systematic Theology/minor in Biblical Studies, Catholic Theological Union; in formation for the Carmelites

“The beauty of the equations, the perfection of nature’s laws — I could believe in a God behind and through them. They spoke to me of divinity. ... Only the scientifically literate will be able to attract and welcome those who do not want to — who cannot — check their minds at the doors of the Church.”

HIEU NGUYEN
Ph.D. in Quantum Information Theory, University of California at Santa Barbara; Seminarian for the Archdiocese of Los Angeles

“Some philosophers have faulty notions such as that scientists are ‘positivists,’ rejecting anything that cannot be measured, and that the use of data is theory laden. Nothing could be further from the truth.”

GREGG KOTCHEY
Ph.D. in Analytical Chemistry/ Nanoscience, University of Pittsburgh; Seminarian for the Diocese of Pittsburgh

“If ordained a priest, I would use my scientific background to evangelize the faithful in the pews about the differences between faith and science [and] ... the need for scientific research given that this inquiry is governed by a moral compass.”

PAOLO PUCCINI, C.S.P.
B.S. in Mechanical Engineering, The University of Texas at Austin; in formation for the Paulist Fathers

“To advance the Church’s mission of spreading justice, we need priests who understand science and can teach others to evaluate the consequences of technologies we take for granted ... [and] make the necessary sacrifices to bring about a more just and sustainable world.”

KEVIN EMBACH, S.J.
B.S., Pre-med major, University of Notre Dame; M.P.H. in Epidemiology, University of Michigan; M.D., University of Virginia School of Medicine; in formation for the Jesuits

“God communicates to us through the physical universe,” says Dr. Kevin Embach. “To be well-versed in science, whether that’s where your talents lie or not, is a way to understand God as a priest and helps others to find God. To help find God in science, in philosophy, in the traditions of the Church, in scripture, in theology — the more you study science the more you realize there’s something behind all of this.”

Embach did not always think seminary was in the plan for him. From childhood, his plans were to become a doctor. It was only many years later, after receiving a Master’s in Public Health and then completing medical school, that Embach answered the call to religious life. “I loved practicing medicine and teaching medicine — for 18 years I practiced in a teaching hospital and loved that. I was also being drawn to the priesthood — they were parallel vocations.”

His Jesuit brothers have been supportive of his pursuit of these “parallel vocations.” “There’s nothing in science that is incompatible with our Catholic faith,” he points out. “God is always right there behind everything. He works through science.”

“When you look at the human body, the ability to be a rational being, the blood clotting system, the immune system, the gastrointestinal system, the reproductive systems, the great vast order that exists in one human body, it’s such a beautiful creation. For this to exist so perfectly without a God does not seem plausible to me.”


(continued on next page)
MICHAEL HIMES ON PREACHING TO TODAY’S CONGREGATIONS

The following is an excerpt from an interview recorded in Tucson, Arizona, January 2016, at a “Science in Seminaries” event we sponsored for rectors, deans, and authors of science course proposals. Rev. Michael Himes, Ph.D. (University of Chicago) is a Catholic priest, professor of theology (Boston College), an author (The Mystery of Faith), former seminary dean, and a most engaging interviewee.

I don’t think it’s any secret that for decades now, Catholic people have been complaining that homilies are really not very good, that the quality of preaching doesn’t really reach them. I think that’s not because we need to give people more opportunities to do public speaking courses, but... that the people in the pews are not speaking the same language as the people in the pulpit. The people in the pulpit tend to talk as if people live in a world not very different from that of their grandparents, whereas in fact we live in a world that’s marked by all sorts of technological innovation, and all sorts of scientific revolution that seems to go unnoticed by the people in the pulpit. Therefore, they are in large part talking to a community that no longer exists.

Perhaps the thing that has changed most as a result of technological breakthroughs is that people now have a different standard for what is true and how you find out what is true. I think that most people in our world today assume that the source of truth, when you push it to the extreme, always turns out to be science. It’s not tradition that people turn to first any longer, it’s not Scripture that people turn to, it’s not a community like the Church that people turn to. It’s the scientific world which governs every aspect of their life in all sorts of ways... In our work, in our seeking entertainment, in our educating children, we look to the sciences.

... I’m not sure that we’re able to speak in that world terribly well from the pulpit at the moment. Things that other people have taken for granted, we have really assumed isn’t part of our work, not part of our need to understand, not necessary for us to evangelize anew. If Paul had never understood the world in which his pagan Greek and Roman hearers lived, he would have been a terrible failure as a preacher. And if we go on talking to people as if we lived in a world that is not marked by the sciences, we too will be terrible failures as preachers.

That’s why, all too often, our people are telling us in response to our best efforts, “you know, Father, I know you meant well, but it really didn’t come across from the pulpit.” It’s a lot more than “speak louder, speak more slowly, use examples, tell a story.” That’s all icing on the cake. We have to look at the cake itself.

To view our entire video interview with Fr. Himes, please visit semscience.net/himesinterview.

I LOVED PRACTICING MEDICINE AND TEACHING MEDICINE; FOR 18 YEARS I PRACTICED IN A TEACHING HOSPITAL AND LOVED THAT. I WAS ALSO BEING DRAWN TO THE PRIESTHOOD – THEY WERE PARALLEL VOCATIONS.

- Kevin Embach, S.J., M.D., M.P.H.
We’ve selected important quotations from Major Church documents addressing the importance of science in
the seminary curriculum. They are available to download and print as posters (11x17) to invite dialogue on
the Big Questions in science and to highlight the positive relationship between science and faith.

John Carroll University
Re-Engaging Science in Seminary Formation
1 John Carroll Boulevard
University Heights, OH 44118

RE-ENGAGING SCIENCE IN SEMINARY FORMATION

Prof. Doris Donnelly
Project Director

CORE PROJECT TEAM
Rev. Richard Benson, C.M.
Rev. Thomas M. Dragga
Rev. Msgr. Jeremiah J. McCarthy
Rev. W. Shawn McKnight
Prof. Nicholas Santilli
Most Rev. George V. Murry, S.J.
(Honorary Member)

OTHER MAJOR CONTRIBUTORS
Josh Tysiachney
Megan Wilson-Reitz
John Young

INTERNS
Mallory Fitzpatrick ’19
Emma Tomsick ’18