

- Working Draft -

March 11, 2024 Draft

SUSTAINABILITY AT XAVIER

Living out our Jesuit Catholic mission and identity



A Laudato Si' University



Message from the President

At Xavier University, sustainability and environmental justice are integral to who we are and our Jesuit Catholic mission. Pope Francis' encyclical *Laudato Si'* and the Society of Jesus' Universal Apostolic Preferences call us to deepen our commitment to caring for our common home.

In 2021, I pledged Xavier University as a *Laudato Si'* University to advance on seven goals of Pope Francis' *Laudato Si'* Action Platform. Our efforts are University-wide, with coordination centered within our Division of Mission and Ministry. Effective partnerships with organizations, faith communities, municipalities and universities in the tri-state region amplify our sustainability efforts.

I am pleased to share this book with you that outlines Xavier University's environmental initiatives and assets, our *Cura Terra*, furthering our culture of radical care.

Dr. Colleen Hanycz, President

to be approved by the President in March

Laudato Si' is Pope Francis' call to "every person living on this planet" to work for global environmental justice. The title of his Papal encyclical, signed on May 24, 2015, translates from Italian to "Praise be to You" which is phrasing from the song *Canticle of the Creatures* written by St. Francis of Assisi.

I	Recognitions.....
II	Organizational Supports.....
III	Sustainable Buildings and Infrastructure.....
IV	Academics and Scholarship.....
V	Student Activities, Club and Events
VI	Food, Food Security, and Waste Reduction.....
VII	Eco-Spirituality and Reflection.....
VIII	Green-Living: Recycle, Reuse, Restore.....
IX	Community Representation, Engagement and Partners.....



I. Recognitions



Archdiocese of Cincinnati Laudato Si' Community

Beginning in 2023, the Archdiocese of Cincinnati recognized Xavier University as a *Laudato Si'* Community for effectively living out Pope Francis' *Laudato Si'* message of caring for God's creation.

Tree Campus

Since 2022, the Arbor Day Foundation has recognized Xavier as a Tree Campus due to our effective forest management and engagement in conservation efforts.

Arboretum Campus

In the Spring of 2024, Xavier applied for Arboretum status from the Arbor Day Foundation as we continue our conservation efforts across campus.

Recognition from the National Association of Educational Procurement

Cathy Baker, Xavier's assistant manager in the Central Procurement Department, has been won for the Brian Yeoman Sustainable Procurement Award through the National Association of Educational Procurement for creating the XU Office Swap and its impact which reduces waste sent to landfills by salvaging and repurposing office supplies instead of purchasing new supplies.



II. Organizational Support

Laudato Si' Action Platform Committee

In 2022, Xavier formed the President's *Laudato Si'* Steering Committee which included broad representation from the campus community and working groups involving more than 40 additional students, faculty, and staff. Xavier's *Laudato Si'* Action Plan is continually refreshed by the current committee as it focuses the work of Xavier's environmental sustainability on the themes of the Pope's encyclical. These themes are:

- Response to the cry of the earth
- Ecological education
- Response to the cry of the poor
- Ecological spirituality
- Ecological economics
- Adoption of sustainable lifestyle
- Community resilience and empowerment

Xavier's approach was praised for its committee structure and significant student engagement by Dr. Nancy Tuchman, founding dean of Loyola University Chicago's School of Environmental Sustainability.

Xavier's 2024 Committee

** indicates chair of a committee*

- Beth Boland, Accounts Payable*
- Julie Hoffmann, Business Analytics and Information Systems*
- Dr. Mollie McIntosh, Biology*
- Peter Smith, Physics*
- Marybeth Sullivan, Health and Wellness*
- Fr. Eric Sundrup, Mission and Ministry*
- Dr. O'neil Van Horn, Theology*

Tim will add remainder of committee

Photo needed of committee/meeting



Chief Sustainability Officer

To support the University in its strategic ecological commitment, a new position was created for an **Associate Director of Mission and Identity/University Sustainability Coordinator**. Xavier is the first university of the Association of Jesuit Colleges and Universities to house its sustainability efforts with the Division of Mission and Ministry.

Photo of Tim Sundrup holding sign

Physical Plant

Among the numerous services provided to the care of the physical assets of the University is the maintenance of electrical, mechanical and plumbing functions, landscaping and groundskeeping and recycle and waste management.

Eigel Center for Community-Engaged Learning

The Center guides the development and integration of meaningful immersive and service-learning courses that bridge classrooms to communities while providing a mutually beneficial exchange of knowledge and resources, including those related to integral ecology.

The Brueggeman Center serves the region connecting as an authentic ‘town-gown’ body advancing effective conversation and understanding. The Center work sin partnership with community organizations —regionally, nationally, and globally—to collaborate in the essential work of deepening interfaith understanding and promoting systemic change on issues of social and environmental justice.

The Universal Apostolic Preferences are four interrelated values announced by the Jesuit Superior General, Fr. Arturo Sosa, S.J., to guide the work of all members of the Ignatian global family for the decade 2019-2029:

- To show the way to God through the Spiritual Exercises and discernment
- To walk with the poor, the outcasts of the world, those whose dignity has been violated, in a mission of reconciliation and justice
- To accompany young people in the creation of a hope-filled future
- To collaborate in the care of our Common Home

III. Sustainable Buildings and Infrastructure

LEED Buildings

Since 2010, Xavier has made a concerted effort to build each of its new buildings to a minimum of the Silver LEED (Leadership in Energy and Environmental Design) Standard. The U.S. Green Building Council specifies that buildings built to LEED specifications achieve the following goals:

- Reducing contribution to global climate change
- Enhancing individual human health
- Protecting and restoring water resources
- Protect and enhance biodiversity and ecosystem services
- Promoting sustainable regenerative material cycles
- Enhancing community quality of life

Xavier buildings that meet LEED standards:

LEED Silver Standard

Conaton Learning Commons
Smith Hall
Justice Hall
Central Utility Plant

LEED Gold Standard

Alter Hall
Health United Building/Recreation Center

Xavier University's new College of Osteopathic Medicine is planned to be built with a minimum of the LEED silver standard.

Geothermal Energy: Our Lady of Peace Chapel

The Our Lady of Peach Chapel, is Xavier's first building to use efficient and renewable geothermal energy. The Chapel's heating and cooling system uses natural stable ground temperature to keep it warm in the winter and cool in the summer.

Green roof on Justice Hall has significant sustainability impact including:

- reduce storm water runoff and the water that does run off is delayed from entering the public sewer which lessens the load on the system
- lessens the heat island effect
- reduce energy consumption by cooling the roof and providing shading and provide thermal mass and insulation
- provide a habitat for animals and plants which helps biodiversity
- have proved a better aesthetics which is very important at Justice where the roof over the dining hall would be very visible by half of the occupants.

White Roofs

Xavier has installed white roofs on many of its buildings which prevent 80% of sunlight from heating the city air and atmosphere, directly reducing the earth's temperature and reducing energy consumption from heating and cooling buildings

Central Utility Plant

In general, central plants have a number of advantages over decentralized systems including:

- Easier servicing since everything is located in one building
- Allows for better maintenance
- CUP has multiple boilers and chillers providing built in redundancy so if one goes out the others will carry the load
- Less overall equipment because of the diversity factor which leads to reduced operating costs.
- Main reason Xavier CUP saved energy/money so much is due to the selection of very efficient equipment. When the buildings on the academic mall were connected, the old and inefficient equipment in Logan Hall was retired.

Air Quality

Low VOC materials, CO2 monitors, and occupancy sensors are just a few of the ways Xavier is keeping the air clean and comfortable indoors and outdoors.

Energy Wheels

Energy wheels reduce energy consumption and maintain comfortable indoor environments.

Lighting

High efficiency lighting is utilized in the vast majority of campus buildings including LED, CFL and T5 light fixtures.





Low VOC Materials

Carpets, paint, and other low VOC materials benefit the natural environment and improve indoor conditions.

Fleet Vehicles

In 2008, Xavier's Physical Plant converted its fleet of 22 utility vehicles to electric power, two of which are solar powered. This switch from gas powered to electric and solar powered vehicles is estimated to reduce Xavier's carbon footprint by 28,000 lbs. of CO₂ per year.

Cura terra – is Latin for care for the earth. It complements other important 'caring' qualities for educational excellence in the Jesuit Catholic tradition: *cura apostolica* (the institution), *cura personalis* (the whole unique person), *cura propria* (oneself), *cura studiorum* (the plan of studies).

IV. Academics

Sustainability Attribution Flags

Per a recommendation from the Ecology Education subcommittee, the development of an Attribute for environmental sustainability courses has been approved; the Attribute will make it easier for students to seek out the courses and more likely students encounter courses integrating this topic while taking other core courses. Syllabuses being gathered to create course catalogue.

Economics, Sustainability, and Society Major

Students can obtain a Bachelor of Arts in Economics, Sustainability, and Society. This program focuses on sustainable economies, and includes the study of natural resources, ecological and environmental problems, processes, and policies at local, national and global levels. Students will integrate economic analysis with cultural studies, global economic development, policy studies, and management, as they gain skills to conceptualize and solve sustainability problems.

Environmental Science Major

Students can obtain a Bachelor of Science in Environmental Science in two ways. The first is a traditional undergraduate four-year degree; the second is through Xavier's Environmental Science with a concentration in Environmental Management Program, where students attend Xavier and Duke University to obtain both their Bachelor of Science and graduate degree in a 5-year period.



Dr. Suparna Chatterjee,
*Associate Professor of
Sustainability and Global
Cultures*



Dr. Mollie MacIntosh,
*Associate Professor of
Biology and Director of
Environmental Science
Major*



Dr. Justin Roush,
*Assistant Professor of
Economics
Director of Economics
and Sustainability Major*

Ecology is the branch of biological sciences that studies ecosystems, specifically the distributions, abundance and relationships of organisms, including humans, and their interactions with the environment. Ecology comes from a Greek word meaning home.

Study Abroad Opportunities

Ireland, June 4 to 14, 2024

This is part of an IDEAS Grant supporting students with disabilities and giving them the opportunity to study abroad. Xavier students spend time at Mary Immaculate College learning about sustainability efforts on their campus and their various educational systems. The group plans to identify one or two ideas that we might implement on Xavier's campus in support of our sustainability goals.

Costa Rica, March 1 – 10, 2024

Students visit five sustainable schools, while learning about culturally responsive teaching. During these school visits, students participate in lessons that integrate the schools' vision of sustainability which includes school gardens, recycling, and composting.

Xavier Expeditions

Founded by theology teaching professor, Dr. Leon Chartrand, Xavier expeditions offer immersion programs to all 7 continents for credit. Students learn and experience “our most basic role within the life-earth-universe story” to “facilitate self-discovery of earth as our primary reality, healer and teacher.”



Center for Teaching Excellence - Book Club

In Spring 2024, the Laudato Si' Action Platform sponsored a book discussion, facilitated by Dr. Kathleen Smythe, on *Braiding Sweetgrass* by Robin Kimmerer, a Potawatomi woman and biologist who explores indigenous wisdom on plants and ecology and how ways of knowing can inform, enhance, and deepen more professionalized ways of knowing in higher education.

Environmental sustainability are actions to protect the environment for the welfare of future generations.

Environmental justice recognizes the connections between social injustice and environmental problems.

A Sample of Scholarship and Presentations of Xavier Faculty and Staff

complete per Alison M

Articulating Globalization: Exploring the Bottom of the Pyramid Terrain

Dr. Suparna Chatterjee, *Organization Studies*,

Beyond Slacktivism: A Culture of Encounter and Ecological Conversion through a Screen?

Dr. Marcus Mescher, *Journal of Catholic Social Thought*

Creating Pedagogy to Integrate Sustainability and the Arts

Dr. Nancy Bertaux, *Journal of Management for Global Sustainability*

Cura Terra: A 5th Care for Excellence in Jesuit Education

Dr. Debra Mooney, *Faith, Justice and Reconciliation Assembly*

Green Analytical Chemistry: Teaching Towards Sustainable and Responsible Choices

Dr. Supaporn Kradtap Hartwell, *Teaching to the Mission*

“I Can’t Breathe”: There is No Climate Justice Without Racial Justice

Anne McCarty, *AJCU Ecology Educators*

Postcolonially Bittersweet in America: Ecojustice and Sacramental Agency

Dr. Kristine Suna-Koro, *Journal of Postcolonial Theory and Theology*

Relationship Models Addressing Food Insecurity at NEXUS Community Garden and Urban Farm

Tim Sundrup, *Loyola University Chicago's Climate Change Conference*

Second-Best Prioritization of Environmental Cleanups

Dr. Justin Roush, *Environmental and Resource Economics*

Spectrality and Survivance: Living the Anthropocene.

Lisa Ottum, *European Journal of Literature, Culture & Environment*

The Implications of Solidarity for Food Ethics

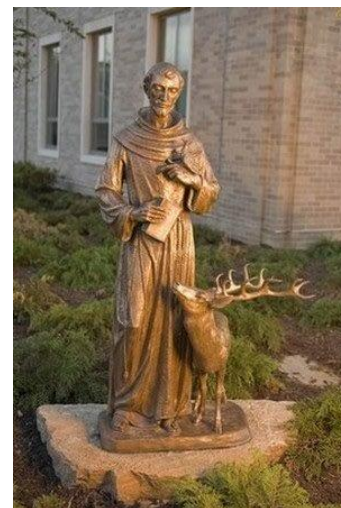
Dr. John Sniegocki, *The Journal of Social Encounters*

Towards Muslim Engagement with Pope Francis’ Encyclical *Laudato Si’*

Dr. Anas Malik, *Arc of the Universe*

Whole Earth Living: Reconnecting Earth, History, Body and Mind

Dr. Kathleen Smythe, *Dixi Books*



“Once one engages the *Laudato Si’* challenge for an ecological conversion, one then begins to understand the struggle necessary to participate in brining into existence a new understanding of creation; one that requires a community to make real a sustainable and renewed earth. Xavier University has begun to do just that. Together, all is possible.”

Fr. Dan McDonald SJ, Midwest Provincial Assistant for Higher Education

V. Student Activities, Clubs, and Events

Summer Service Internships

Throughout the Summer, Xavier provides opportunities for students to serve full-time at local community-based, non-profit organizations and live in community on campus. Several of our partner organizations include a focus on sustainability and ecological justice including the Civic Garden Center of Greater Cincinnati and the IMAGO Earth Center.

Alternative Breaks

Xavier's Alternative Breaks program offers students Spring break options designed to create a world of active citizens immersed in education, service, and reflection with a focus on social justice issues facing the world today. Sustainability-focused experiences include:

- The Effects of Coal Mining in Appalachia
- Preserving Forest Diversity
- Simple Living and Appalachian Culture
- Conservation of Our Native Ecosystems

Picture needed of students on AB on Catalina Island

Xavier Student Sustainability Club

XSS promotes sustainability while fostering an environment where students can explore, learn, and engage in discussion. Ecofest, the Club's annual headlining event, is hosted every spring to support reuse and recycling habits. The club produces educational materials including a pamphlet on climate anxiety. The club advisor is Dr. Rachel Behr.

Animals, People, and the Earth at Xavier Club

This student organization raises awareness about animal rights and the ways in which human activity impacts the environment. The club advisor is Dr. John Sniegocki.

Catholic social teachings – are ideals and values that have been disseminated through papal and other Catholic Church documents over time; themes include stewardship of creation, seeking the common good, enhancing the life and dignity of the human person, protecting human rights, and pursuing peace and justice.

VI. Food, Food Security, and Waste Reduction

The NEXUS (Norwood, Evanston, Xavier University, Sustainability) Community Garden and Urban Farm

The NEXUS garden on Xavier University's campus is a collaborative learning and growing space managed by Bellarmine Chapel in partnership with Brick Gardens, a black-owned business that creates micro-economic assets for communities in food deserts and addresses racial inequity in the food system by providing access to food, jobs for youth, and education on healthy nutrition.

Designed to bring together diverse stakeholders from its neighboring communities, the NEXUS garden strives to grow transformative relationships, address food insecurity, educate on the importance of urban agriculture, and promote sustainability. NEXUS does this through a culture of encounter and mutual belonging, centered on organic gardening, healthy food, environmental justice, and the sacred connection of an individual and our common home. Approximately one thousand pounds of fresh produce are grown and donated to local food pantries from the garden each year.

Visual model of the relationships?

Composting

- Feasibility being assessed
- NEXUS installed Johnson-Su Bioreactor

The Hoff Dining Hall and Compass/Chartwells

The Hoff Dining Hall is adorned with symbols and communications associated with the Gifts of the Ignatian Heritage, the Seal of the Society of Jesus, and waste reduction and climate change mitigation messaging.

The Hoff Dining Hall has a five-level vertical hydroponic grow system producing bok choy, basil, mint, kale, lettuce, micro greens, and edible flowers that are used in student meals and campus catering

In response to the cry of the poor and our Jesuit values, Auxiliary Services has created an online system where meals can be donated in the form of swipe card entry into the Hoff Dining Commons and then anonymously requested by students facing food insecurity.

Programing includes food waste collection and reduction event.

Picture of hydroponic grow system

Cintas Concessions Leftover Food Program for Students

Text needed

The Store

Xavier's student-run food pantry, called "The Store" promotes food security and nutrition by providing free fresh, frozen and non-perishable foods, as well as hygiene and household products. The Store was created in 2017 following a survey conducted by students enrolled in a sociology course which found that 23% of students without a meal plan were food insecure, including nearly 11% who were experiencing hunger. The Store is available to all students whether they live on campus or off campus. Xavier students can access it by swiping in with their Xavier One Pass. Xavier's *Laudato Si'* Action Platform: Cry of the Poor Committee is exploring ways to further address food insecurity.



VII. Eco Spirituality and Reflection

Fr. Michael J. Graham, S.J. Legacy Labyrinth

Honoring Xavier's 34th president, a permanent outdoor labyrinth is a spiritual tool for finding God in daily life, the hallmark of Ignatian Spirituality.



The inscription on the entering plaque reads:

As the longest serving president in Xavier history, Fr. Graham's vision expressed that, "Xavier men and women become people of learning and reflection, integrity and achievement, in solidarity for and with others." This Labyrinth offers an invitation to all members of the community to reflect and discern their own path, always asking "Where is the more universal good?"

Ecological Taizé Prayer Service

The Jesuit Family of Works offers a series of presentations, immersions and prayer experiences focused on the ecological spirituality of *Laudato Si'* including an annual Ecological Taizé prayer service renewing our spiritual commitment to *Laudato Si'*.

Go Veg/Lent program - John Sniegocki

Text needed

Native plants

The campus prioritizes the plants that grow naturally in the region to benefit the local environment and wildlife (i.e., bees, hummingbirds), including trillium, wild geranium, and goldenrod. A native grassland berm and buffer zone is west of the Cintas Center.

Mission Mile

The campus community is invited to take a beautiful walking tour of the campus with reflection prompts at mission-relevant sites and along the way.



VIII. Green Living: Recycle, Reuse, Restore

XU Office Swap

Xavier's Office Swap program reduces office waste by exchanging and providing supplies for free on campus. The program provides opportunities for University faculty and staff to swap new and gently used office supplies instead of buying new ones. There is no cost for any of the items. This initiative creates a circular system for supplies and reduces the amount of waste sent to landfills.

XU Office Swap has already resulted in over 1,000 items being salvaged, 450 items being repurposed, and saves the university approximately \$3,000 each semester. Faculty and staff can access the online catalog of supplies through the Xavier Buy system.

Move in/out

Text needed

- Re-Store being assessed
- Partnership with St. Vincent de Paul being assessed
- Alternative waste procedures being assessed

Waste Less Wednesdays

"Waste Less Wednesdays" seeks to increase recycling across campus. The program includes a gamified quiz, pledge, and informational posts.

E-waste Recycling

Xavier is currently exploring additional partnerships with Cohen Recycling for an end-of-year electronic waste recycling event. E-waste is approximately 2% of landfill material and 70% of toxic contamination.



Green living means embracing a lifestyle of daily habits that involve eco-friendly practices aligning with 3 principles: reduce, reuse, recycle

Recycling Audit

In the Fall of 2023, Xavier completed an audit of its recycling programs to address opportunities and capabilities to improve green living across campus. This audit was done compliments of Xavier adjunct professor Bob Gedert, and two Xavier students: Savannah Mays, an Economics, Sustainability, and Society major, and Luke Frigo, an Environmental Science major.

85-87% of all materials placed in recycling bins at Xavier are not contaminated and able to be recycled. This percentage is consistent with Cincinnati residential recycling. Better separation of recyclables from non-recyclable trash is the 'next-step' for campus to reduce our contamination rate.

DYK – Rumpke, Xavier's recycling services company, separates plastics, paper and aluminum --- so all we need to do is put them in one of the 2,000 campus recycling bins of any sort!



IX. Community Representation, Engagement, and Partnerships

The Archdiocese of Cincinnati

Xavier representatives, including the Chief Sustainability Officer, serve on the:
Laudato Si' Action Platform Implementation Committee
Care for Creation Task Force
Cincinnati Catholic Higher Education Group

Greater Cincinnati Green Business Council

Since 2013, Xavier has been a member of the Council which serves as an educational forum for the exchange of information, expertise, and environmental best practices for collective green action in the region. Member organizations including Cintas, Duke Energy, Fifth Third Bank, Kroger, LPK, Macy's, Madtree, P&G, and Scripps. Xavier's Chief Sustainability Officer and Dr. Justin Roush, Assistant Professor of Economics, were elected to serve as the Council's Vice Presidents of Membership from 2024 through 2025.

City of Cincinnati Partnership – Green Cincinnati Plan

Xavier is a supporter of the City of Cincinnati on its Green Cincinnati plan to reach carbon neutrality. Xavier faculty and staff helped various steering committees develop portion of the plan and participates in the City's higher education cohort. Xavier is working to become an official Partner with the City in its Green Cincinnati Plan in multiple areas of overlap with Xavier's *Laudato Si'* Action Plan, including being a member of the City of Cincinnati's Higher Education cohort focused on food waste.

Green Umbrella

This network of the tri-state region is committed to taking action on climate change. As an organizational member since its founding, Xavier is an active supporter of its activities such as for the annual Midwest Sustainability Summit of which Dr. John O'Keefe serve as the **XYZ – Tim would know this appointment**.

Faith Communities Go Green

This collaboration between Green Umbrella and Equasion, an organization promoting interfaith dialogue in Greater Cincinnati, partners with religious communities to reduce the risk and impacts of climate change. Xavier is a supporter through the collaborations with the Archdiocese of Cincinnati and Dr. Anas Malik, Professor of Political Science, who is on the Steering Committee.

Threes for Trees Program

Since 2014, the partnership of Formica Corporation and the Xavier University men's basketball team has resulted over 20,000 planted trees for 3-point baskets. As part of the program's tenth year, Learfield Sports' Xavier Sports Properties along with the original partnership, teamed up with Cincinnati Parks to plant ten trees *locally* for every three-point basket made during the 2023-24 season.



Social Innovation Weekend

Hosted by Xavier's Center for Innovation, students at this weekend-long 3-part event: (1) learn about a topic from a team of community experts, (2) divide into teams and engage in workshops to the outlined problem; and (3) create and present possible solutions. The 2024 topic was waste reduction on Xavier's campus.

Xavier Reading Camp and Sustainability

Two hundred children Cincinnati engage in two weeks of learning activities about plants, bees, composting, alternate/renewable energy, deforestation and humans from XYZ – Ask Teresa about this.

Jesuit Networks Advancing Ecological Justice

International Association of Jesuit Universities

EcoJesuit

Association of Jesuit Colleges and Universities

Cincinnati Jesuit Family of Works



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*Xavier's sustainability logo was designed
by Professor Jonathon Gibson's art class in 2014*

For more information on any topic www.Xavier.edu/Green

Printed on recycled paper in 2024