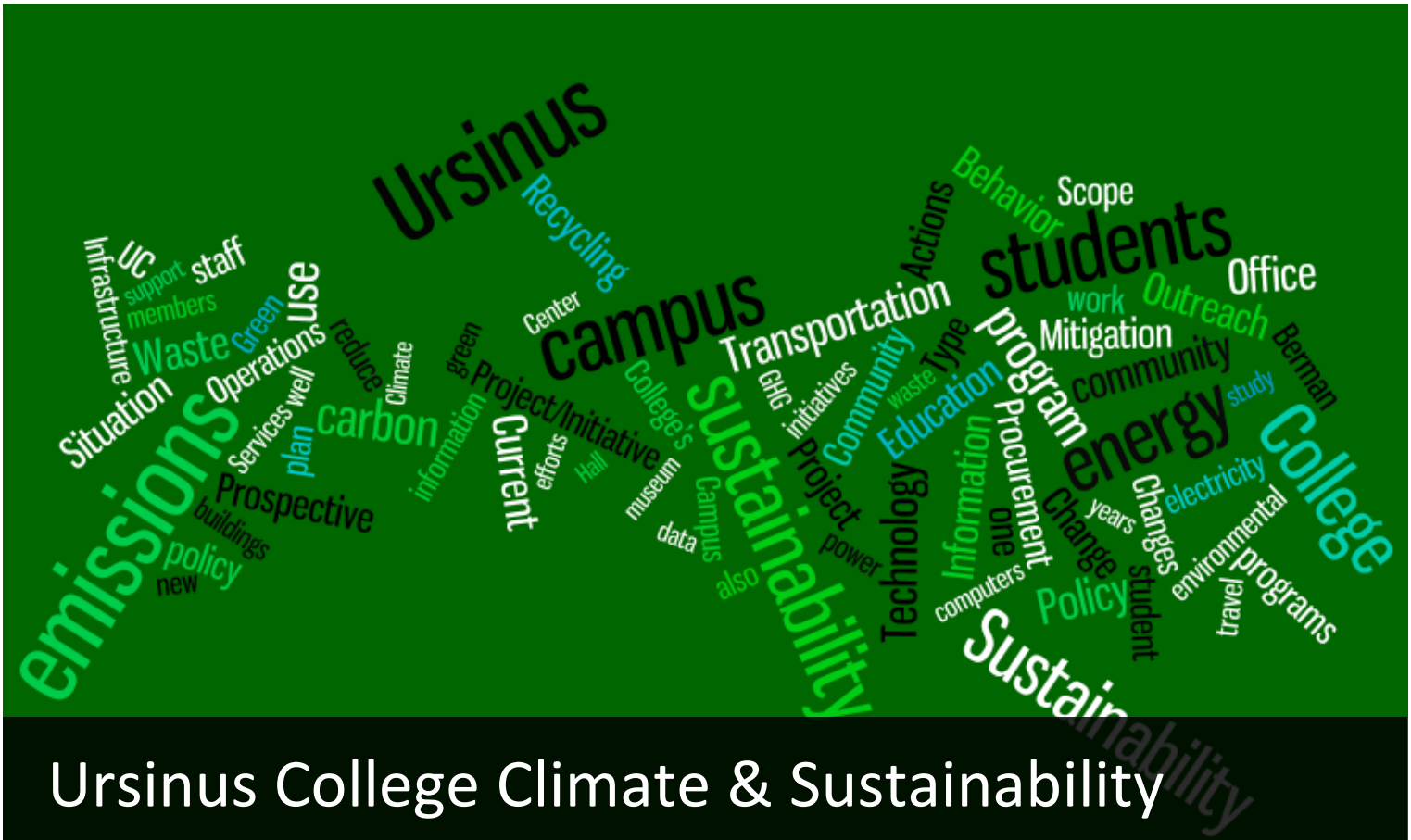

Ursinus College Climate & Sustainability Action Plan

Office of Sustainability

K. Shannon Spencer, Campus Sustainability Planner

Ursinus College is located in southeastern Pennsylvania, near Philadelphia. This is its first Climate and Sustainability Action Plan. This plan is organized by administrative units on the campus in order to facilitate the implementation and accessibility of the plan to those who will ultimately be making decisions and taking actions that affect sustainability and our greenhouse gas emissions in various areas of the College. –June 2013

Ursinus College – Office of Sustainability
601 E. Main Street, Collegeville, PA 19426
610-409-3000

Acknowledgements:

This plan is meant to guide the College's steps as we work toward our long-term goal of climate neutrality. I would like to thank all of my many collaborators from offices and departments across the College who helped craft this document. Without their input and feedback, this document would be far less accurate, robust and useful. I hope that it is, and will continue to be all of those things. I would like to thank to my editors: Facilities Director Andrew Feick, Professor Richard Wallace and Professor Leah Joseph, for the many hours they spent reading, re-reading, providing comments, advising, and being a cheering section. Finally, I would like to thank President Bobby Fong for his support of the American College and University Presidents' Climate Commitment.

Table of Contents

Letter from the President

URSINUS COLLEGE
OFFICE OF THE PRESIDENT

601 East Main Street, Collegeville, PA 19426
phone 610.409.3587 fax 610.409.3642

31 May 2013

Dear Members of the Ursinus College Community,

When President John Strassburger signed the American College and University Presidents' Climate Commitment in 2007, Ursinus College pledged to work toward the long-term goal of attaining climate neutrality. Six years later, we have taken many steps toward that goal, including:

- implementing energy saving strategies across the campus;
- setting LEED Silver equivalent as a baseline for all new construction;
- undertaking energy assessments to assist in long-term planning for our heating plant;
- developing a baseline inventory of our campus greenhouse gas (GHG) emissions by source;
- incorporating climate change and sustainability topics into our curricular, outreach and campus educational programs;
- instituting sustainability events and programming in multiple departments and academic areas.

Our latest cooperative effort is the compilation of this Climate and Sustainability Action Plan, the product of the Office of Sustainability staff working with faculty and staff across the campus. These sections are tailored to the needs of departments, offices, and programs and are intended to be useful long-term planning tools.

I introduce this plan as a roadmap for continuing our work toward sustainability. It calls on all members of the Ursinus community to work cooperatively to conserve energy and resources, to minimize our environmental footprint in all aspects of campus operations development, and to promote an awareness of the responsibility we each have as stewards of the environment.

Ursinus endeavors to provide a transformative education for our students. We must also strive to be transformative in the world in which our students will live their lives. By focusing efforts on campus to raise awareness and adopt changes that will reduce our impact on our natural world, we are demonstrating to our students yet another way in which transformation can happen – at the institutional and community level.

Go, Bears!

Bobby Fong
President

Section 7: Special Use Buildings and Spaces

Special Use Buildings – Chapter 7.1: Bakes Athletics Center & Athletics Department

Back to Table of Contents

The Athletics program at Ursinus College sponsors teams in 25 sports. 508 Ursinus students (about a third of the student body) participate in our team sports. Additionally, we have over 1,000 participants in six intramural sport teams and approximately 170 participants in seven club teams. Though there is some overlap between intramural participation and varsity teams, we estimate that approximately half of the Ursinus student body participates in some form of organized sports here on campus. Athletics is an important part of the Ursinus experience; thus it is also an excellent venue for extending the message of sustainability to our student body as well as to our staff.

Our program encompasses indoor and outdoor facilities. The Floy Lewis Bakes Athletics Center is a recently renovated facility. Together with the Helfferich Gymnasium and our field house, it comprises our indoor athletics facilities. Our outdoor facilities include two artificial turf fields (both include lighting and one includes an irrigation system), a baseball diamond, eight tennis courts (two of which have lighting), a softball field, and four practice fields (one of which has lights). The table below details our athletic facilities.

By far the largest source of GHG emissions that is related to Athletics comes from transportation. At this point we are not tracking emissions from travel for most of the College and not at all for Athletics, making it impossible to say what the exact emissions from Athletics'-related transportation are. However, our teams travel extensively, both for local trips and for events that are further afield. For example, our 2011 football travel schedule, which included

five away games, produced approximately 159 kg of eCO_2 emissions.[1] Our football team plays fewer games than some of our teams, but it travels in three large buses and travels roughly the same number of trips as some of our teams with more games.[2]

Many of our teams make special trips to exhibition games and tournaments. Many of our spring athletic teams go to Florida, California, or elsewhere during spring break to train. All of these trips have CO_2 emissions associated with them – a figure which will need to be added to our GHG emissions report. When we have calculated this figure, we will need to assess options for lowering and/or offsetting our emissions.

See Appendix U for a list of our athletic facilities.

[1] The standard metric for measuring transportation-related CO_2 emissions is grams of CO_2 emissions per passenger mile (g/pass-mi). The figure shown above was converted to kilograms.

[2] Some of our teams play very few away games, some play more. This figure is given only as an example, not to indicate an average.

7.1 Current: Athletics

The largest carbon footprint impact from athletics in Division III sports comes from travel and building usage. Travel includes both team travel and recruitment-related travel. Typically, up to 70% of a Division III athletic program's budget goes toward travel. Building-related energy use typically accounts for the majority of energy used by the Athletics program. This represents an excellent opportunity for reducing energy consumption.

The table below shows the mitigation or sustainability projects and/or initiatives that have already or currently are taking place within this administrative unit of the College. These initiatives are broken into nine areas. These areas are further delineated by type of action.

Table 7.1-1: Mitigation and Sustainability Projects/Initiatives – Bakes Athletic Complex

Type of Project	Mitigation Project/Initiative – Bakes Athletic Complex
Administrative Unit Operations	Personnel • Athletics has appointed one of their head coaches to serve as a sustainability point person for the Department. Lighting • Lights in the athletics complex are turned off when not in use. This includes the fitness center, pool, field house, etc. The field house has the longest hours, open from 6 am until 2 am during the academic year. These lights have been retrofitted from metal halide to more efficient fluorescent and every fixture is on its own motion sensor. Lights in the pool, main gym and gymnastics gym have also been retrofitted from metal halide to fluorescent. • Lighting is set up so that only necessary lights are on, particularly in areas that have low or no traffic and where limited lighting has no repercussions for safety.
Waste & Recycling	• A virtual program for game days is being developed. This will enable fans to scan programs directly into their phone or laptop, reducing paper waste. • The OS and Facilities Services procured new large recycling bins for public use during sporting events. These bins are located around our new football field as well as at other athletics venues on campus.
Behavior Change & Education	• Many of our athletic teams volunteer with sustainability efforts, such as Move-In and Move-Out. We also have teams who volunteer at our Organic Farm. • Provide condiments for food only in bulk containers (no individual packets).
Transportation	• Athletics coaches and administrators use phone conferencing when possible to reduce the need to travel. • We attempted to coordinate teams' events through the conference scheduling of multiple teams at one venue. However, this proved to be

	ineffective due to the excess amount of time that athletes were required to wait for the other team.
Outreach	• Teams currently run a used clothing/shoe drive that benefits a Philadelphia program called "Back on Your Feet" as well as sending reusable footwear to athletes in Kenya.
Infrastructure	Lighting • Lighting upgrades have been made throughout the athletics complex, including CFL installation and other fluorescent lighting. • Motion sensors have been installed on the lights in the field house to reduce unnecessary energy use. • Motion sensors have been installed in various areas of the athletics complex. HVAC • The field house is heated by four, constant volume air handlers. Facilities Services has installed variable frequency drives (VFD's) on two of the units and plans to install on the other two in 2012. These allow the units to run at speeds proportionate to demand, thus saving a lot of electricity used by the motors. Field Management • Athletic fields are dressed with compost instead of topsoil to help maintain the health of the fields and add nutrients to the soil. • We use pelletized organic fertilizer made from composted products on athletic fields. Field Construction • Patterson Field, our football field, was replaced with artificial turf – easier upkeep, less time spent tending the field. The field is made from recycled rubber, sand and other materials that are recyclable at the end of their life. This field is also laid in strips so that if a section of it wears more quickly than the rest of the field, it can be replaced, extending the overall life of the field. • Patterson Field will now host multiple sporting events, which will assist in meeting the need for playing spaces. • The new field has lighting, which will allow it to be used during the day or night.

7.1 Goals: Athletics

Goal 1: Determine what the Athletics Department's commitment to sustainability on campus is, and promote that commitment within the community.

Goal 2: Within the Athletics population, increase awareness of the Athletics Department's commitment to sustainability and the importance of conserving resources (this includes all athletes, staff, and coaches within the Athletics Department).

Goal 3: Work with the Facilities Services Department to set energy-use reduction goals within the Athletics venues.

Goal 4: Work with the Facilities Services Department to set waste reduction goals within the Athletics Department.

Goal 5: Work with Facilities Services and the OS to set goals for reducing Athletics' transportation-related GHG emissions.

7.1 PA: Athletics - Prospective Actions

The following prospective actions are suggestions for consideration. It is assumed for the purposes of this document that any on-going activities that are listed above in the "current situation" section will continue. As it is difficult to see far in advance what the needs and constraints on the College will be, there are a wide variety of options presented here to consider. Some may be viable options for immediate implementation; some may seem impossible to implement in the current situation or foreseeable future, but may be viable at a later date depending on changing circumstances. These prospective actions will be reviewed periodically by staff in our Office of Sustainability (OS) and with relevant parties in the affected areas of the College.

7.1 PA-1: Athletics – Prospective Actions: Policy

Immediate (2013-2018)

CSAP and Planning Documents

- Adopt the Climate & Sustainability Action Plan for the Athletics Department.
- Write a green mission for the Athletics Department.

- Write a strategic plan to implement the Climate and Sustainability Plan for Athletics that will offer short- and long-term suggestions for improvements that can be made in operations and practices throughout the program.

Operational Documents

- Establish a set of green standards for UC athletic events that reflect best practices researched and demonstrated at other institutions.
- Adopt a green procurement policy for Athletics.

Energy & Resource Use Survey

- Assess the Athletic Department's operations with regard to energy and resource use.
- Work with Facilities Services to determine energy reduction goals.

Responsible Consumption

- Consider setting low consumption targets for all departments. E.g., 25% reduction of office paper used by 2020, 50% reduction of office paper used by 2030, etc.

Transportation

- Create a transportation policy that addresses limits on or guidelines for team travel, including distances, number of trips, etc.
- Work with the OS to determine transportation within Athletics and track emissions, possibly by team.

Mid-Term (2019-2030)

Assessment & Updates

- Update the Climate and Sustainability Plan for Athletics as new technologies and practices become available and acceptable.
- Expand the green procurement policy for Athletics.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.

- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-2: Athletics – Prospective Actions: Internal Operations

Immediate (2013-2018)

General

- Use eco-friendly laundry detergent for cleaning uniforms and towels.
- Develop a virtual program for all games that can be scanned onto hand held electronic devices using QR codes.

Paper

- Print team tickets & programs on recycled paper.
- Print official documents double-sided on recycled, recyclable paper, and mark the documents as such.

Office Guidelines

- Whenever possible and feasible, incorporate office-wide practices suggested in the Sustainable Office Guidelines into day-to-day operations (Appendix F).
- Encourage offices, departments and individual staff and faculty members to participate in OS green certification programs, once developed.

Event Guidelines

- When possible and feasible, incorporate items from the Sustainable Event Guidelines into event planning. (Appendix G)

Mid-Term (2019-2030)

Staffing

- Select a sustainability staff member or student sustainability workers whose job is to incorporate sustainability into athletics. This staff member would be in addition to the Green and Bear It Team, which is a volunteer group.

Energy Goals

- Work with Facilities Services to create a strategic plan to decrease energy usage resulting from operations or offset resultant carbon emissions by at least 25% of

2010 levels by 2020. This may include the use of alternative energy sources, energy reduction and management techniques, or other strategies.

- Work with Facilities Services to create a strategic plan to decrease energy usage resulting from operations or offset resultant carbon emissions by 50% of 2010 levels by 2030.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-3: Athletics – Prospective Actions: Procurement

Immediate (2013-2018)

General Building

- Work with purchasing office to procure furniture that is more sustainable (e.g., made from sustainable materials, has a longer life, will not scratch floors, etc.).
- Look into types of mats for external entrances to determine if there are better models for removing rock salt and other chemical from shoes.

Purchasing Guidelines

- Use the Green Purchasing Guidelines in Appendix H to help guide purchasing decisions.

Office Equipment

- Purchase office supplies with recycled content.

Sports Equipment

- Purchase equipment from a fair trade sports company to promote awareness among students – this may just be for intramural sports, but could be expanded to others as well. (Fairtradesports.com)

Uniforms & T-shirts

- Purchase athletic uniforms that are made from recycled fabrics.

- Purchase organic cottons when possible and feasible.

Mid-Term (2019-2030)

Vehicles

- We should continue to investigate transportation companies that have more efficient vehicles.

General Purchasing

- Investigate options for recycled, recyclable, and/or sustainable products for all athletics purchases

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-4: Athletics – Prospective Actions: Information Technology Changes

Immediate (2013-2018)

Internet Communications Tools

- Set up a UC Bears Sustainability Facebook page or Twitter feed (with student/s assigned to regular postings or tweets)
- Add Green & Bear It webpage linkable from the main UC Athletics website to promote the current and future programming efforts

Sustainability Guidelines for Athletics

- Create a database of sustainability guidelines for Athletics in coordination with the OS.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-5: Athletics – Prospective Actions: Behavior Change & Education

Immediate (2013-2018)

Incentive Program

- Create an incentive program for athletes to encourage participation in Green & Bear It programming and general sustainability programming in Athletics.
    - This could be in the form of tracking hours through the UC Green Office of Sustainability (would require coaches to sign off on hours worked) toward the Green Key award (a senior graduation honor bestowed by Environmental Studies and the Office of Sustainability that is in the development stage), but would likely be more successful as a separate Green Bear type of award given to senior athletes at graduation who have completed a certain amount of sustainability volunteer work.

Green Team

- Have one student from each sport team serve on the Green & Bear It Team (GrABIT). The GrABIT members will collaborate with the Athletics sustainability staff member and the OS. Each GrABIT member will be responsible for being the sustainability liaison for their sport; GrABIT members will work together to encourage collaboration between teams; create competitions between teams, develop incentive programs to get teams involved, and work on outreach and education programs. See Appendix V for a list of what such a team would be responsible for.

Own Sustainability

- Work to make sustainability part of the UC brand. State the College's values and approach to sustainability up front in communications with prospective students, parents, and the press. Own sustainability at the College and wear it proudly.
- Expect staff to fall in line with the College's policies, practices, and expectations around Sustainability.

Sustainability Action List

- Develop a list of actions that the department is willing to implement toward improving their sustainability, e.g., printing fewer documents, lowering their paper use, adjusting all departmental computer settings to print double sided as the default.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-6: Athletics – Prospective Actions: Waste & Recycling

Immediate (2013-2018)

Waste Stream Assessment

- Work with Office of Sustainability staff to conduct a waste stream assessment of home football games – both in the stadium and in the parking lots.
    - Use a team of student volunteers to assess waste generated, type of waste generated.
    - Use data to assess use of the existing recycling program to deal with waste.
    - Data will also serve as a baseline to demonstrate the effectiveness of the recycling program, once it is implemented.

Game Day Waste Management

- Institute the following measures at games/events:
    - Programs
        - Reduce printing of game programs; print programs on recycled paper; create and distribute online a virtual program and educate fans about it.
    - Recycling

        - Have three Sustainable Game Days per year for the first two years; then increase to one per sport per year; then increase from there.
        - Participate in the US EPA Game Day Challenge. This is a friendly competition for colleges and universities to promote waste reduction at their football games.
        - Have a Green Gang offshoot of the Green and Bear It Team that is responsible for handling recycling at games:
            - Distribute clear recycling bags and educational information to tailgaters - have Green Gang pick them up.
            - In-game proactive collection team
            - Post-game bowl sweep for recyclables
        - Put recycling bins every 30-40 feet on the concourses of games. These should be larger than the trash bins and distinctively colored and marked as a visible cue to fans that they are expected to prioritize recycling.
            - Studies show that people will not walk further than this.
    - Food
        - Concessions- offer local and/or organic food.
        - Research the use of compost bins at stadiums. Look into having food vendors provide compostable foods at UC games.
        - Use and compost biodegradable plates, cups, etc.

Mid-Term (2019-2030)

Net Zero Games

- Set a goal of a net zero-waste season.
- Set a goals to make all games net zero games.
    - Ideally, all materials could be recycled, reused, or composted after an event

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-7: Athletics – Prospective Actions: Transportation

Immediate (2013-2018)

Bike Riding

- Promote bike riding for exercise – consider introducing an intramural bicycling program that would incorporate the Perkiomen Trail.

Team Travel

- Review the shared busing of teams to sports venues.
    - This is not functioning well currently; however, there may be ways to have it work more effectively – for example, having the sports teams' events scheduled concurrently.
    - Work with organizations charged with scheduling events to determine if a more student-friendly schedule could be arranged.
- Encourage team coaches to keep track of recruiting travel miles and method of transportation so that a good estimate of GHG emissions can be obtained.
    - When possible, have coaches travel together for coordinated recruiting trips.
- All team travel, to games as well as travel that is not required (exhibition games, travel to training sites), has CO_2 emissions associated with it, all of which the College must report and eventually eliminate (or offset).
    - Facilitate the collection of data about travel with the OS.
    - Assess options for lowering and/or offsetting travel-related emissions.
    - Implement options as they are deemed feasible.

All Travel

- Encourage staff members to consider renting hybrid vehicles for traveling if a vehicle is being rented.
- Encourage staff members to consider extending their carbon-reduction awareness to their private purchases: purchasing hybrid vehicles, buying carbon offsets for personal travel, etc.

Mid-Term (2019-2030)

Team Travel

- Encourage teams to purchase carbon offsets for team travel.
- Consider purchasing carbon offsets for some or all of Athletics recruiting travel.
- Investigate contracting with a bus company to have hybrid buses for transportation to and from games.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-8: Athletics – Prospective Actions: Community Outreach

Immediate (2013-2018)

School District Collaboration

- If allowed by NCAA rules, collaborate with local school district (Perkiomen Valley) on recycling programs and other sustainability programming.
- If allowed by NCAA rules, collaborate with local school district (Perkiomen Valley) to create a green mentoring system that would bring green team members from varsity, club or intramural teams to talk to local high school teams about green efforts.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.1 PA-9: Athletics – Prospective Actions: Infrastructure

Immediate (2013-2018)

Buildings – Energy

- Strategic Plan
  - Create a strategic plan to decrease energy usage in the facilities or offset resultant carbon emissions by 25% of 2010 levels by 2020. This may include the use of alternative energy sources, energy reduction and management techniques, purchased offsets or other strategies.
- Solar Array
  - Add solar array to the flat roofs of the Athletics buildings when fiscally feasible.

- Install 300 kW solar array on the Athletics complex.

Buildings – General

- Grey water: Investigate grey water reclamation systems for showers, laundry facilities in athletics, and irrigation systems.
- Pest Control: Use Integrated Pest Management techniques in all facilities.
  - See the EPA fact sheet on IPM: http://www.epa.gov/pesticides/factsheets/ipm.htm
- Lighting
  - Continue to make lighting updates throughout the Athletics complex to more energy efficient bulbs and fixtures. When possible reduce the total lumens in a given space to minimum levels as determined by a body such as the Illuminating Engineering Society of North America or another reliable source.

Buildings – Fitness Center

- Investigate alternative energy options that have high educational benefit within the context of the Athletics Facilities on campus. For example:
  - Hook bikes up to help power or cool the fitness room.
    - One person generates between 50 to 150 watts of electricity when exercising. This could be used to power televisions, lighting or fans in the fitness center.
  - Outfit the machines that do not draw current (bikes, rowers, stair steppers) so that users can plug in and recharge their cell phones, iPods, and other handheld devices using the energy generated by the workout.

Buildings – Pool

- Install a pool dehumidification unit that will allow waste heat from the unit to be used to maintain pool water temperatures during summer operation.

Grounds – Field Maintenance

- Maintain fields in different ways, depending on the season. For example, in field hockey the grass needs to be cut to a specific height, different from other sports, but during off-season all fields can be cut to the same length. Work with coaches to ensure that everyone understands the reasons for changes in the field care regime, particularly the value in protecting the usefulness of the field.
- Pest Control: Use Integrated Pest Management techniques at all facilities.

Institute water saving measures in the following areas:

- Indoor facilities
    - Install low flow faucets, showers, urinals/toilets, waterless urinals.
    - Measure water use.
    - Set water reduction goals.
- Outdoor facilities
    - Install rain water capture and gray water systems, soil moisture/irrigation control systems, and Xeriscaping.
    - Measure water use.
    - Set water reduction goals.
    - Reduce irrigation use on The Snell Field.
    - Capture cooling tower blow-down water and use it to irrigate the practice field.
    - Capture Snell Field irrigation water and use it to irrigate the baseball field.

Housekeeping

- Use green cleaning supplies.

Mid-Term (2019-2030)

Decreased Energy Usage

- Implement the strategic plan to decrease energy usage in the facilities or offset resultant carbon emissions by 25% of 2010 levels by 2020.
- Work with the Facilities Services Department and the OS to create a strategic plan to decrease energy usage in the facilities or offset resultant carbon emissions by 50% of 2010 levels by 2030.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

Special Use Buildings– Chapter 7.2: Berman Museum of Art

Back to Table of Contents

The Berman Museum of Art at Ursinus College opened in 1989 and is regarded as one of the nation's finest small college art museums. The Museum is one of only 900 or so museums nationwide fully accredited by the American Association of Museums and houses over 4,000 paintings, prints, drawings, sculpture, decorative, and cultural objects representing a broad array of art historical genres. In addition, a collection of large-scale outdoor sculpture is integrated throughout the living and learning environment of the 170-acre campus, making it an ideal place to study, stroll and contemplate. This also offers opportunities for marrying art and environment.

With over 30,000 visitors annually, the Berman Museum enriches the fabric of the community and has redefined liberal learning at Ursinus College. Our museum professionals remain committed to providing a positive, informative and enjoyable experience for both the novice and the art aficionado. The Berman is also committed to reaching out to the local community and supporting issues of importance to both the campus and the broader community, including social and environmental justice issues.

The Berman Museum has one classroom that is used daily as well as the main gallery, a smaller upstairs gallery, and the newly added Pfeiffer wing, green roof and sculpture garden. The Berman serves as a venue for teaching about a broad spectrum of topics and is an ideal location for cultivating learning opportunities. In addition, the Museum has a permanent collection that staff care for and preserve. The Berman is proud to provide access, education, and opportunities for learning to its constituents – both on- and off-campus.

7.2 Current: Berman Museum

The Berman Museum is already home to many environmental initiatives and exhibits. From a recent addition built to LEED standards and a green roof that incorporates a sculpture garden to community parades that feature recycled art and energy saving features that are common across campus, the Museum is working toward embracing environmental themes and practices. The table below is a list of some of the initiatives that exist here:

Table 7.2-1: Mitigation and Sustainability Projects and Initiatives: Berman Museum of Art

Type of Project	Mitigation/ Sustainability Project/Initiative: Berman Museum of Art
Operations	Environmentally Themed Exhibits • "Clyde Butcher: Visions for the Next Millennium, Wilderness Photography" (2004-2005) • "'To Follow Nature in Her Walks': The Art and Environmentalism of John James Audubon" (2006) • "Min(d)ing the Landscape", an exhibit of photographs by Edward Burtynsky (2010) • "Re-Imagining the Distaff Toolkit": a guest-curated exhibition of contemporary art in which artists re-appropriate objects traditionally associated with "women's work" (2012) • A show of the sea grass baskets made by islanders off the South Carolina coast (2013)
Behavior Change & Awareness	Environmental Art Award • The Berman Museum of Art provides a venue for the presentation and viewing of the annual Environmental Art Award. The award is given to a student who has submitted art with an environmental theme for the annual art show. This award is sponsored by the Rinde family and was initiated in the past five years. On-Campus Education & Partnerships • The Museum also brings in artists to guest-lecture and conduct workshops or participate on campus as artists-in-residence, often in tandem with specific exhibitions. • The Museum has established long-term, ongoing partnerships with student groups on campus, such as Art Exhibitionists and UCARE (among others). These partnerships emphasize engagement with campus initiatives such as community engagement through the arts, environmental sustainability, etc.
Waste & Recycling	Recycling • Berman staff members recycle much of the materials that are produced and/or used within the museum. Reusing • Berman staff members reuse materials used for protecting art work in transit whenever possible, including bubble wrap, tissue paper, corrugated cardboard, shipping boxes and crates. This saves materials and cut costs.
Transportation	Group Shipments • The Museum groups shipments with other museums when possible to reduce transportation costs and emissions.
Community Outreach	Community Parade • In 2010, the Berman held a community partnership parade (and workshops leading up to it) where community members were invited to come in and make art out of recycled materials. We hope to continue this event in the current and future years. Partnerships • Staff members at the Berman have established educational partnerships with several regional school districts. One partnership this coming year will include programming that will have recycling and re-use as underlying concepts. • The Museum partners with local environmental and community

	organizations around art and the environment to help spread the word both about the benefits of sustainability and about the efforts of the Berman.
Infrastructure	Construction • LEED Silver construction standards were used in the construction of the Pfeiffer Wing of the museum in 2010. Green Roof • The Pfeiffer Wing of the Museum is home to Ursinus College's first installed green roof, opened in 2010. The roof is also home to a sculpture garden and is open for viewing and enjoying year-round. Lighting • Lighting upgrades to CFLs throughout the office spaces and storage spaces, standard across campus. • Motion sensors on office lights, standard across campus.

7.2 Goals: Berman Museum

There are no identified goals for the Berman Museum of Art.

7.2 PA: Berman Museum - Prospective Actions

The following prospective actions are suggestions for consideration. It is assumed for the purposes of this document that any on-going activities that are listed above in the "current situation" section will continue. As it is difficult to see far in advance what the needs and constraints on the College will be, there are a wide variety of options presented here to consider. Some may be viable options for immediate implementation; some may seem impossible to implement in the current situation or foreseeable future, but may be viable at a later date depending on changing circumstances. These prospective actions will be reviewed periodically by staff in our Office of Sustainability (OS) and with relevant parties in the affected areas of the College.

7.2 PA-1: Berman Museum – Prospective Actions: Policy

Immediate (2013-2018)

Policy

- Create a "green vendor" policy that encourages or requires vendors to provide environmentally-conscious products in order to do business with the Museum.

Mission

- Develop a green mission statement regarding the Berman's intentions for becoming more sustainable.

Responsible Consumption

- Consider setting low consumption targets for all departments. E.g., 25% reduction of office paper used by 2020, 50% reduction of office paper used by 2030, etc.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-2: Berman Museum – Prospective Actions: Internal Operations

Immediate (2013-2018)

Exhibitions & Collections

- Regularly schedule exhibitions with themes related to the environment and/or sustainability. Coordinate with Environmental Studies faculty, Office of Sustainability staff, and others to organize additional related campus activities.

Energy Audit

- Undergo a museum-specific energy audit to determine additional operational changes that would help the museum become more energy efficient.

Office Guidelines

- Whenever possible and feasible, incorporate office-wide practices suggested in the Sustainable Office Guidelines into day-to-day operations (Appendix F).
- Encourage offices, departments and individual staff and faculty members to participate in OS green certification programs, once developed.

Event Guidelines

- When possible and feasible, incorporate items from the Sustainable Event Guidelines into event planning. (Appendix G)

Mid-Term (2019-2030)

Exhibitions & Collections:

- Aim to have an "Energy Neutral" or "Net Zero" exhibit. Such an exhibit would take into account all emissions produced from the show, and mitigate those emissions. This type of exhibit would incorporate an educational component to show visitors how the Museum was able to do this.

Exhibit Lights:

- Investigate installing motion sensors that automatically turn lights on when a visitor walks into the room in one of the exhibit halls as a pilot project. If the pilot project is successful, expand the project to include additional exhibition spaces. This measure will cut electricity costs and reduce the amount of time art works are exposed to light.

- Install clock timers on the motion sensors that will track the amount of time the lights are on. This will enable curators to more accurately keep track of light exposure while at the same time enabling Facilities Services to track energy savings.
- It will be critical to include signage throughout the Museum to explain the system to visitors and to get their buy-in.

Power strips:

- Use power strips on all non-phone, corded electronic items in the building, including microwave ovens, any device with a remote control, and any device that has a light or clock that stays on after it is turned "off". Turn the power strips off every night.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-3: Berman Museum – Prospective Actions: Procurement

Immediate (2013-2018)

Purchasing Guidelines

- Use the Green Purchasing Guidelines in Appendix H to help guide purchasing decisions.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-4: Berman Museum – Prospective Actions: Information Technology Changes

Immediate (2013-2018)

Web

- Update the Berman Museum of Art web pages to include a "Greening the Museum" section as one of the main categories.
    - This webpage would include a list of the items listed above in the "Current Situation" section for the Museum.
    - Include a section on how patrons can get involved in greening art.

General

- Consider other ways to incorporate technology in the Museum to educate visitors about greening efforts in the Museum.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-5: Berman Museum – Prospective Actions: Behavior Change & Awareness

Immediate (2013-2018)

Signage

- Post signs in the Museum about the greening initiatives that are happening. This informs visitors of practices and educates them about why they should care.

  Specific signage needs:

  - Interpretive signage for the Green Roof.
  - Interpretive signage for any sustainability themed exhibits.
  - Informational signage about sustainable initiatives at the Museum.
  - Signage specific to new initiatives.

"Talk the Walk"

- Write articles about green programming at the Berman in the bi-annual newsletter, Mixed Media. Contribute articles to the OS newsletter to inform the campus community about green programming at the Berman, and work with the Communications Office to create articles in the Ursinus magazine about the Berman's sustainability programming. Also host campus-wide discussions about the greening efforts underway at the Berman.

Student Handbook

- Update the Berman's student handbook to include a section on green initiatives and practices at the Museum. This should include information for the students about their participation in the initiatives.

Recycling

- Educate Museum staff, including student workers, about what materials can be recycled, particularly those that are unique to a museum setting.

Reusing

- Educate Museum staff, including student workers, about the types of materials that can be re-used under what circumstance to expand reuse of materials.

Sustainability Action List

- Develop a list of actions that the department is willing to implement toward improving their sustainability, e.g., printing fewer documents, lowering their paper use, adjusting all departmental computer settings to print double sided as the default.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-6: Berman Museum – Prospective Actions: Waste & Recycling

Immediate (2013-2018)

Recycling

- Put all recyclables into the recycling bins, including items that may have insect infestations from shipping. These can be recycled safely by our trash and recycling haulers.
    - Attempt to get estimates for percentages of waste that is recycled as baseline information.

Reusing

- Increase the amount and/or types of materials re-used for protecting art work in transit whenever possible, including bubble wrap, tissue paper, corrugated cardboard, shipping boxes and crates. This will save materials and cut costs.
    - Attempt to get estimates for percentages of waste that is reused as baseline information.

Events

- Work with campus catering to incorporate sustainability into the events at the Berman. This should include:
    - Use of compostable paper products, when possible.

- Use of recyclable plastic ware.
- Presence of recycling bins to accept the amount of waste created at the event.
- Possibly a composting container, at least at any net zero events.
- Signage about what to compost, what to recycle, what to trash.
- Locally produced coffee.
- Local produce, when available.

Mid-Term (2019-2030)

Goal setting

- Set goals for amounts of waste recycled and reused that is in line with campus goals.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-7: Berman Museum – Prospective Actions: Transportation

Immediate (2013-2018)

Shipping

- Continue to group shipments with other museums when possible to reduce transportation costs and emissions.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-8: Berman Museum – Prospective Actions: Community Outreach

Immediate (2013-2018)

Events

- Continue to host community events that draw visitors into the Berman around environmental themes.

Mid-Term (2019-2030)

Partnerships

- Expand partnerships with local environmental and community organizations around the topics of art and the environment to help spread the word both about the benefits of sustainability in art and about the efforts of the Berman.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.2 PA-9: Berman Museum – Prospective Actions: Infrastructure

Immediate (2013-2018)

Green Roof

- Maintain the Berman's Green Roof plants to assure that they are healthy and attractive for visitors to this very public space.

Lighting

- Work with Berman administrators to determine whether to and how to go about increasing the areas of the museum that are on motion sensors for lights, including exhibit space.

Cleaning

- Use non-toxic cleaning products in all areas of the building.

Paint

- Use low/no VOC paints when preparing the walls for new exhibits.

Energy Audit

- Work with museum administrators to arrange a museum-specific energy audit to determine additional operational changes that would help the museum become more energy efficient.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

Special Use Buildings – Chapter 7.3: Kaleidoscope Theater

Back to Table of Contents

The Kaleidoscope is the home of the college's Department of Theater and Dance. The department offers coursework in acting, dance, choreography, directing, history and theory of performance, theatrical design, and production. The building is also a base for many other campus wide arts and cultural events from student run arts organizations to professional music and theatrical productions to film and speaker presentations. The building is also used for its classroom space; this scheduling is controlled by campus administrators who schedule all classes for campus. The Kaleidoscope houses[3]:

- The Lenfest Theater, a 380 seat state-of-the-art Proscenium Arch Theater
- Flexible seated Black Box Studio Theater (100 – 150 Seats)
- Box Office and Concessions Booth
- Rehearsal Studio
- Costume Storage Room
- Scenic Workshop
- Classrooms that include a design studio
- Laundry facilities
- Scenic storage
- Prop storage room

Our facilities are available for rental during the month of December and from mid May – July. Occasionally, we rent our facilities for individual performances during the academic year. 2012 marked the first summer use of the building for a high school summer drama camp.

By implementing energy-saving measures throughout the Kaleidoscope, we have reduced the cost of staging theatrical events. Though we do not have a way to track this savings, we know that it is substantial.

[3] http://www.ursinus.edu/netcommunity/page.aspx?pid=330

The building, financed entirely by gifts from alumni and friends of the college and a state community development grant, was built in 2004-2005. This was two years prior to our signing of the ACUPCC and environmentally-friendly design standards were not employed in the design or construction of this 51,622 square foot building. The building is one of our larger consumers of heating, cooling and electricity due largely to the high ceilings, open spaces, and lighting requirements of theatrical spaces. In the face of this, the College has hired a full time building manager for the Kaleidoscope. This staff member has managed the building to conserve energy where and when possible. However, issues remain with the building temperatures which are hard to regulate in wide open spaces. The performance spaces are particularly susceptible to temperature extremes in the "shoulder seasons" of spring and fall (when the heat plant has not been switched from heating to cooling).

7.3 Current: Kaleidoscope Theater

Back to Table of Contents

The table below shows the mitigation or sustainability projects and/or initiatives that have already or currently are taking place within this administrative unit of the College. These initiatives are broken into eight or nine types, depending on whether there are items related to Facilities Services Department included. These items are further delineated by type of action.

Table 7.3-1: Mitigation/Sustainability Projects and Initiatives: Kaleidoscope Performing Arts Center

Type of Project	Mitigation/Sustainability Project/Initiative: Kaleidoscope Performing Arts Center
Policy	• We focus on areas that have high environmental impact, are inexpensive, and are easily influenced (biggest bang for the buck). Examples: energy efficiency, recycled content of materials, reusability, and sustainably managed timber products (e.g., Lowe's sells products that are certified by the Forest Stewardship Council (FSC)).
Internal Operations	Lighting & Electrical Energy • Stage lighting and theater lighting is kept off during the summer except during tours or when the building is rented. • The general building lighting is set for summer hours. Lights go off at 5:30 during the summer; machines are powered down; etc. This will be altered when the building is in use as a rental space. • During the academic year, the stage lighting is turned on only when the stage is in use for an event or event preparation (fluorescents are used otherwise). • There is a tour setting for both the Lenfest Theater and the Black Box

Theater.

- The ventilation systems on the building computers are regularly checked and cleaned in house.
- Photocopiers are set to energy saving mode.
- All office equipment not in use at the end of the day, such as lights, computers, monitors, printers and photocopiers is switched off.
- We practice general good building management, for example turn off building lights when not in use, don't run air-conditioning with windows open, and ensure windows and buildings are adequately insulated.
- Work with suppliers to purchase lights that use less energy while still supplying the required lighting for stage.

Building Facilities

- We check regularly for dripping taps or running toilets and file work orders with Facilities when drips or leaks are found.

Office Equipment & Appliances

- The plotter uses 100 % recycled paper for printing plans/drawings… 40' drawing (comes in roll)
- The washer/dryer in the Kaleidoscope that are used for cleaning costumes are energy efficient models.

Set Construction, Props & Costumes

- We use minimal amounts of foam; we reuse it whenever possible and recycle it when possible through the OS.
- We do not use hot knife techniques with foam to reduce the release of toxic chemicals.
- We use architectural wood screws that are safer and can be reused for future set construction.
- We use low VOC paints when possible.
- We generate a great deal of sawdust, and we save it for texturing and other scenic treatments.
- We reuse sets, wood and other materials on our sets whenever possible.
- Used props and costumes are purchased from local thrift shops and consignment stores or rentals, saving both money and resources.
- Storage areas are maintained for both props and costumes, alleviating the need to purchase new items.
- We inspect our facility for proper ventilation; don't use toxic chemicals in our set construction; dust collection in place for saw dust (installed in building).
- We design our sets to be disassembled (use less glue; more screws). We also use wood screws that are stronger and safer and can be reused.
- Refrain from cutting lumber that could be used uncut (10 foot tall flats instead of 9). Or we purchase lumber of such a size that we can, with several cuts, fill our needs exactly.
- We use non-toxic latex paints with low/no VOC.
- We use modular sets when possible.

Paper Use

- We print on both sides of paper to reduce paper use in script production.
- We print numbers of programs for productions based on ticket sales, and only print more on the Friday of a production run if we will need more for the weekend.

Rehearsal activity

	• Rehearsals use mostly fluorescent lighting; show lighting is not used until Tech Weekend.
Procurement	Building • *Used equipment is considered and purchased when appropriate* and applicable. • Energy efficient equipment is preferred. • LED theatrical lighting is a viable option that is considered when making purchases. Production • We reuse, rent, borrow/lend, or buy used props and costumes rather than purchasing new, including sharing or renting as options. • We purchase materials from "green" sources when possible. • When items that we expect to keep and use long term, we use whole life costing rather purchasing lower quality items that are less expensive.
Information Technology Changes	• When making upgrades to equipment, we purchase more efficient replacement equipment. • Computers and systems equipment is shut down when not in use. • The Kaleidoscope staff has begun to virtualize the servers in the building. The virtualized servers can take the place of up to eight regular servers, depending on the requirements of the regular servers. This reduces the electricity demand from the servers (though this is not a large demand), and also produces the heat of a single server, thus lessening the cooling requirements for the space. Virtualized servers also improve systems functions.
Behavior Change & Education	In-house Awareness • We keep Material Safety Data Sheets (MSDS) on all chemicals used in all shops. The sheets are kept in binders that are easy to access in the shop and shop users are told about the binders and where to find them. • All students are required to take a course in stagecraft. During this class theater safety and sustainability are discussed. Rentals • We encourage rental customers to use minimum lighting for rehearsals and to switch off lights when rooms are not in use.
Waste & Recycling	Set Design • Scenery that can be reused is salvaged and used on future productions. • Oil based paints are not used. However, if they are donated, they are collected and disposed of as part of the College's disposal pick-up. Shellac is used instead polyurethane. This product is used up rather than disposed of. Light bulbs and lamps • Our fluorescent light bulbs are recycled. Foam • We recycle foam whenever possible.
Transportation	• We reduce the frequency and quantity of deliveries and collections through planning and bulk purchasing. • The Department uses a shared College-owned truck when picking up rented furniture and scenery for shows. Videoconferencing • When possible, we use virtual meeting tools such as tele- or videoconferencing to reduce travel requirements.

Community Outreach	• Patrons are encouraged to recycle programs from shows. • Patrons are encouraged to recycle containers for beverages consumed during shows.

Infrastructure	Classroom facilities
	• We have motion sensors installed in most of our offices and classrooms in the Kaleidoscope.
	Heating & Cooling Energy
	• The HVAC system is set for summer hours. A/C temperatures are programmed to go up at 5:30 p.m. during the summer.
	• HVAC in the Lenfest Theater is set in two zones: a stage zone and an auditorium zone. This allows greater control over the energy expended during rehearsals and events.
	• HVAC systems in our theater spaces are only turned on when those spaces are reserved to be used. They are controlled through a software program that allows them to be programmed by need.
	• *If HVAC is needed in the theaters unexpectedly, there is a manual override to the HVAC for both zones in the Lenfest and for the entire Black Box theater. If the HVAC in these areas is turned on, it turns off automatically after four hours.*
	Lighting
	• Lighting has been upgraded to energy efficient lights for the entire building, including the stages.
	• Lobby lights are kept off during the day and are on light sensors that turn them on automatically at dusk.
	• Stage lighting in both theaters has an automated system that allows users to set lighting with a single touch.
	Staffing
	• The Kaleidoscope has a dedicated operations manager who manages and enforces energy, waste management and procurement strategies.
	• We ensure that all heat/cooling sources (like direct sunlight, drafts, a fridge, photocopier, or coffee maker) are located away from your thermostat, in order to make sure the thermostat is measuring the proper temperature.
	• When possible, we set the thermostat for lower temperatures in workshops and storage areas.
	• The Big Switch-Off – we switch off the lighting rig when not in use
	  ○ When not required for actual performance, switch off discharge lighting between the end of the reset or rig check in the late afternoon and at the half-hour call (35 minutes before the show starts), and between matinee and evening performances. When first adopting this approach, it may give extra confidence to have the lighting technicians return to the theatre for the half-hour call.
	• Exterior lighting and hoardings
	  ○ We have switched to low-energy bulbs – swap standard tungsten bulbs with low-energy compact fluorescent light (CFL) bulbs, or consider retrofitting external lighting schemes with LEDs. Switch off exterior lighting in the daytime when lighting impact isn't visible.
	• Front of house: We have switched to low-energy bulbs in the foyer and backstage lighting. Use motion sensors and timer switches to switch off lights in the theatre office, bar, cloakroom, corridors, lobby, foyers and

	toilets when not in use. (Note: if installing motion sensors to switch lights off and on, consider using the same sensors to switch off heating and ventilation in some areas).

7.3 Goals: Kaleidoscope Theater

Back to Table of Contents

Goal 1: Determine what the Theater & Dance Department's commitment to sustainability on campus is, and publicize that commitment within the community.

Goal 2: Within the Theater & Dance population, increase awareness of the Department's commitment to sustainability and the importance of conserving resources (this includes all actors, dancers, stage crew and managers, directors, set designers, etc. within the Theater & Dance Department).

Goal 3: Work with the Facilities Services Department to set energy-use reduction goals for the Kaleidoscope.

7.3 PA: Kaleidoscope Theater - Prospective Actions

The following prospective actions are suggestions for consideration. It is assumed for the purposes of this document that any on-going activities that are listed above in the "current situation" section will continue. As it is difficult to see far in advance what the needs and constraints on the College will be, there are a wide variety of options presented here to consider. Some may be viable options for immediate implementation; some may seem impossible to implement in the current situation or foreseeable future, but may be viable at a later date depending on changing circumstances. These prospective actions will be reviewed periodically by staff in our Office of Sustainability (OS) and with relevant parties in the affected areas of the College.

7.3 PA-1: Kaleidoscope Theater – Prospective Actions: Policy

Back to Table of Contents

Immediate (2013-2018)

Mission Statement

- Investigate the possibility of writing a green mission statement for the Department and the Kaleidoscope that includes: procurement, operations, transportation, education & behavior change, waste reduction and recycling. Work with UCGreen on this mission.

Goal Setting

- Set goals and benchmarks for waste reduction, procurement and energy-use reduction within the Kaleidoscope.
- Set a timeline for achieving benchmarks and implementing these goals.

Purchasing Policy

- Consider agreeing on green purchasing objectives and then writing and implementing a green purchasing policy. As part of this policy, consider including the following (some of which are already common practice in the Kaleidoscope):
    - Reuse, rent, borrow/lend, or buy used props and costumes rather than purchasing new, including sharing or renting as options.
    - Identify one person who can help facilitate green purchasing within the department.
    - Ensure that the department's intentions are clear in the wording of the policy.
    - Increase green sources for materials that are needed.
    - Focus on products that have high environmental impact, expensive, and are easily influenced (biggest bang for the buck). Examples: energy efficiency, recycled content of materials, reusability, and sustainably managed timber products (e.g., both Lowe's and Home Depot sell products that are certified by the Forest Stewardship Council (FSC)).
    - Use whole life costing rather than awarding contracts on the lowest price basis.

Responsible Consumption

- Consider setting low consumption targets for all departments. E.g., 25% reduction of office paper used by 2020, 50% reduction of office paper used by 2030, etc.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.3 PA-2: Kaleidoscope Theater – Prospective Actions: Internal Operations

Immediate (2013-2018)

Set Construction

- Consider implementing the following suggestions from http://www.thegreentheater.org/50Things.html:
  - Plan the season around the set. Coordinate between Theater and Dance departments.
  - Investigate local industries to see if there is a market for wood waste (for example for press logs or hog fuel.)

Costumes

- Consider writing a set of guidelines for costuming based on the following suggestions from http://www.thegreentheater.org/50Things.html . Encourage costume contractors (freelance designers), and in house staff (when applicable) to do the following:
  - Use sustainable fabrics such as hemp, bamboo, organic cotton, wool when reusable fabric is not available.
  - Dye fabrics less often, and use fewer toxic dyes when fabric must be dyed.
  - Avoid bleaching fabrics.
  - Buy/use only non-toxic makeup.

- Use only pump hairsprays (no aerosols).
- Dry clean less. Make fewer costumes that need dry cleaning and use Woolite or shampoo when possible as an alternative to dry cleaning.
- Investigate local industries to see if there is a market for fabric waste (Recycling Services, Inc. (RSI) in Pottstown is a possibility).

Building

- Waste Electrical and Electronic Equipment
  - When buying electronic equipment, ensure supplier specifies in the contract how these items will be disposed of at the end of their life cycle
- Use electronic mailings and digital marketing such as blue tooth communications.
- Dressing room lighting: Investigate ways to reduce the number of bulbs used in the dressing rooms.

Building Rental

- Specify that production companies that rent theater space must comply with the theatre's recycling and waste management practices and policies and buy from environmentally friendly sources, such as timber from sustainable forests with (FSC) certification.

Office Guidelines

- Whenever possible and feasible, incorporate office-wide practices suggested in the Sustainable Office Guidelines into day-to-day operations (Appendix F).
- Encourage offices, departments and individual staff and faculty members to participate in OS green certification programs, once developed.

Event Guidelines

- When possible and feasible, incorporate items from the Sustainable Event Guidelines into event planning. (Appendix G)

Mid-Term (2019-2030)

- Tracking & Assessment
- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.

- Reassess goals and prospective actions.

7.3 PA-3: Kaleidoscope Theater – Prospective Actions: Procurement

Immediate (2013-2018)

Costumes

- If costumes must be purchased or created from scratch, consider using natural fibers and fabrics that do not need to be dyed.

Purchasing Guidelines

- Use the Green Purchasing Guidelines in Appendix H to help guide purchasing decisions.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.3 PA-4: Kaleidoscope Theater – Prospective Actions: Information Technology Changes

Immediate (2013-2018)

Email

- Consider adopting the use of a footer message such as "Please consider the environment before printing this e-mail." in all emails.

Website

- Create a link from the main Ursinus webpage (and other locations on the UC website that make sense) to the Kaleidoscope landing page. Have a link from the Kaleidoscope landing page to a webpage about sustainability initiatives in the theater. Work with UCGreen to create content, including:

- A list of current initiatives in the Kaleidoscope
- Information about recycling in the Kaleidoscope
- An overview of sustainability in Theater
- Links to other sites about sustainability in Theater

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.3 PA-5: Kaleidoscope Theater – Prospective Actions: Behavior Change & Education

Immediate (2013-2018)

Advertisement

- If possible, print programs and posters on recycled paper, and let audience know. State that documents are "printed on recycled paper" at the bottom.

In-house Awareness

- All Theater majors are required to take a course in stagecraft. During this class theater safety and sustainability are discussed. Expand this discussion to include one or two class periods devoted to discussing sustainability in theaters, the role it plays in the environment and the role it plays in keeping theater users safe.
- Consider writing sustainability goals into the student safety book for theater students.
  - Post this book on the webpage, where it is easily accessible to all theater students.

Staff Education

- Purchase additional books about sustainability in the theater for the department. Keep the books somewhere that they can be accessed easily.

- Consider having an annual designated faculty/staff think tank meeting to strategize and check in about sustainability within the Kaleidoscope.
    - Consider inviting students to participate in these discussions.

Sustainability Action List

- Develop a list of actions that the department is willing to implement toward improving their sustainability, e.g., printing fewer documents, lowering their paper use, adjusting all departmental computer settings to print double sided as the default.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.3 PA-6: Kaleidoscope Theater – Prospective Actions: Waste & Recycling

There are currently no identified Prospective Actions in this area.

Immediate (2013-2018)

Mid-Term (2019-2030)

7.3 PA-7: Kaleidoscope Theater – Prospective Actions: Transportation

Immediate (2013-2018)

- Try to avoid last minute supplier calls, which will usually require a dedicated trip.

Mid-Term (2019-2030)

7.3 PA-8: Kaleidoscope Theater – Prospective Actions: Community Outreach

Immediate (2013-2018)

Advertisement/Programs

- Provide a QR code on the back of all programs for dance and theater shows at the Kaleidoscope that links to sustainability information about the Kaleidoscope. Work with Office of Sustainability staff to create content. This information might include items such as:
    - Sustainability measures taken related to the show (e.g., reused materials or costumes)
    - Sustainability measures that are taken at the Kaleidoscope
    - Things theater patrons can do to be sustainable (e.g., recycle their cups and programs, carpool or walk if they can, etc.)
- Reuse programs when possible; have ushers ask patrons if they would like to have their program reused (rather than taking it away or recycling it).
- Print programs on recycled paper and make note of that fact on the programs.

Recycling at Shows

- Ensure that there are Kaleidoscope recycling bins are available at all shows for both programs and for mixed recycling.

Building Rental

- Include sustainability principles in rental contracts. Encourage renters to follow some of the guidelines and actions in this document while they are using the Kaleidoscope facilities.
- If an energy meter is installed on the stage lights, consider charging rental customers a surcharge for going over some set amount of energy usage. This would both encourage them to cut down on their use, and lower our GHG emissions.

Mid-Term (2019-2030)

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.
- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

7.3 PA-9: Kaleidoscope Theater – Prospective Actions: Infrastructure

Immediate (2013-2018)

Energy Audit

- Work with Kaleidoscope staff to conduct an energy audit of the Kaleidoscope to determine where energy is being used, and how to lower the building's overall energy usage.

Energy Monitoring

- Consider installing air quality sensors and temperature sensors in the theater spaces to enable the system to run at a reduced rate when the auditorium is not fully occupied.
- Consider installing an electric meter on the stage lights for the Black Box and the Lenfest Theater. This would allow directors, actors, and rental customers, to better understand the amount of energy that is required to put on a performance. It would also allow directors to track the electricity use of any given show.

Lighting

- Investigate the possibility of having lights in stairwells that have natural lighting be on a light sensor that would turn off during daylight hours.
- Investigate the possibility of installing light sensors on the outdoor lights above theater exits so that they turn off during daylight hours.

Maintenance

- Ensure filters are clean in air handling units, as dirty filters reduce air flow, making fans work hard and increasing energy usage.

Mid-Term (2019-2030)

Power Factor Assessment

- Conduct a power factor survey to identify potential savings from incorrect power factors on the Kaleidoscope.
    - Check electrical equipment following any power factor corrections.

Tracking & Assessment

- Continue the efforts noted above.
- Track progress toward goals.

- Track sustainability actions taken within the Department and building.
- Reassess goals and prospective actions.

Works Cited

42U. Energy efficiency best practices. 2012. http://www.42u.com/efficiency/data-center-best-practices.htm (accessed March 15, 2012).

About.com. Kilowatt per Hour. 2011. http://saveenergy.about.com/od/energyefficientappliances/g/kilowatt_def.htm (accessed 2011 йил 14-September).

ACUPCC. ACUPCC Implementer. 2011 йил September.

American College and University Presidents' Climate Commitment. “Implementation Guide.” Presidents Climate Commitment. (accessed 2010 йил 1-December).

Clean Air-Cool Planet. Clean Air-Cool Planet Carbon Calculator Users Guide. 2010. http://www.cleanair-coolplanet.org/toolkit/calculator/v6.5_Users_Guide.pdf (accessed 2010 йил 6-December).

DeVito, David and Nate Rempe. "Textbook Insights: What is in store for the college bookstore? Whitepaper." Textbook Insights: What is in store for the college bookstore? Nebraska Book Company. 2006. http://www.nebook.com/images/KIP_whitepaper1.pdf (accessed 02 27, 2013).

“Summary for Policy Makers.” In In IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, by O., R. Pichs-Madruga, Y. Sokona, K. Seyboth, D. Arvizu, T. Bruckner, J. Christensen, J.-M. Devernay, A. Faaij, M. Fischedick, B. Goldstein, G. Hansen, J. Huckerby, A. Jäger-Waldau, S. Kadner, D. Kammen, V. Krey, A. Kumar, A. Lewis, O. Lucon, P. Edenhofer, edited by R. Pichs-Madruga, Y.Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schlömer, C. v. Stechow (eds) O. Edenhofer, 25. Cambridge, United Kingdom and New York, USA: Cambridge University Press,, 2011.

Gardner, Andrew. “Middlebury Athletics Adopts Green Mission.” About Middlebury Athletics. 2009 йил 8-June. http://www.middlebury.edu/athletics/about/generalnews/node/112741 (accessed 2011 йил 7-July).

GHG Protocol Initiative. About the Greenhouse Gas Protocol Initiative. 2011. http://www.ghgprotocol.org/ (accessed 2011 йил 15-September).

Harvard University Office for Sustainability. "Peak Energy Demand in the Summer." Harvard University Office for Sustainability. Harvard University. 2011. http://green.harvard.edu/node/4270 (accessed February 3, 2012).

Harvard University Office For Sustainability. "Volatile Chemicals." Harvard University Office for Sustainability. Harvard University. 2011. http://green.harvard.edu/node/2800 (accessed February 3, 2012).

Monitoring Analytics, LLC. “State of the market report for PJM.” 2010 йил 15-11. http://www.pjm.com/documents/reports/~/media/documents/reports/state-of-market/2010/2010q3-som-pjm.ashx (accessed 2011 йил 11-05).

Pennsylvania Bus Association. “Act 124 (Idling Restrictions) and Motorcoaches.” PBA Bulletin. 2008 йил 11. http://www.pabus.org/documents/Bulletins/2008%20November%20%20Reporter%20Idling%20ACT%20124.pdf (accessed 2011 йил 17-05).

Santa Clara University Office of Sustainability. “Climate Neutrality Action Plan.” 2010 йил 15-01. http://www.scu.edu/sustainability/upload/SCU-Climate-Action-Plan-011510.pdf (accessed 2011 йил 24-05).

Schaper, Louise L. "Let green creep: Ten steps to sustainable library operations." Library Journal Archive. Library Journal. 05 15, 2010. http://www.libraryjournal.com/article/CA6727897.html (accessed 03 21, 2012).

U.S. EPA. Creating an ENERGY STAR Showcase Dorm Room. http://www.energystar.gov/index.cfm?c=higher_ed.bus_dormroom (accessed 2011 йил 24-05).

UND Sustainability. Close the fume hood. 2012. http://green.nd.edu/education/college-of-science-energy-challenge/close-the-fume-hood/ (accessed March 20, 2012).

Union of Concerned Scientists. Climate change impacts and solutions for Pennsylvania: How today's actions shape the state's future. Cambridge, MA, MA: Union of Concerned Scientists, 2008.

University of Colorado Boulder Facilities Management. Lab fume hoods. http://www.colorado.edu/FacMan/about/conservation/FumeHoods.html (accessed March 2, 2012).

Ursinus College. Ursinus College - About Us. 2010. http://www.ursinus.edu/netcommunity/page.aspx?pid=418 (accessed 2010 йил 10-December).

US EPA. Introduction to the concept of green chemistry. 08 10, 2011. http://epa.gov/greenchemistry/pubs/about_gc.html (accessed 02 23, 2012).

USGBC. USGBC: What LEED is. 2011. http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988 (accessed 2011 йил 14-September).

UTMB Research Technical Services. "RTS Tech Tips." University of Texas Medical Branch Health - Research Services. Dec. 30, 2011. http://research.utmb.edu/RTS/tech_projects.shtm (accessed Feb. 22, 2012).

Vyas, Nandita and John C. Mlade. "Sustainable Lab Operations." Lab Manager Magazine. LabXMedia Group. April 2, 2010. http://www.labmanager.com/?articles.view/articleNo/3610/article/Sustainable-Lab-Operations (accessed February 3, 2012).

Appendices

Appendix A: American College & University Presidents' Climate Commitment Text

Back to Table of Contents

We, the undersigned presidents and chancellors of colleges and universities, are deeply concerned about the unprecedented scale and speed of global warming and its potential for large-scale, adverse health, social, economic and ecological effects. We recognize the scientific consensus that global warming is real and is largely being caused by humans. We further recognize the need to reduce the global emission of greenhouse gases by 80% by mid-century at the latest, in order to avert the worst impacts of global warming and to reestablish the more stable climatic conditions that have made human progress over the last 10,000 years possible.

While we understand that there might be short-term challenges associated with this effort, we believe that there will be great short-, medium-, and long-term economic, health, social and environmental benefits, including achieving energy independence for the U.S. as quickly as possible.

We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop.

We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities. Accordingly, we commit our institutions to taking the following steps in pursuit of climate neutrality.

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.

a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
b. Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
    i. A target date for achieving climate neutrality as soon as possible.
    ii. Interim targets for goals and actions that will lead to climate neutrality.
    iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
    iv. Actions to expand research or other efforts necessary to achieve climate neutrality.
    v. Mechanisms for tracking progress on goals and actions.

2. Initiate two or more of the following tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.

    a. Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
    b. Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
    c. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.
    d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.
    e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution's electricity consumption from renewable sources.
    f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution's endowment is invested.
    g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.
3. Make the action plan, inventory, and periodic progress reports publicly available by submitting them to the ACUPCC Reporting System for posting and dissemination.

In recognition of the need to build support for this effort among college and university administrations across America, we will encourage other presidents to join this effort and become signatories to this commitment.

Signed,

The Signatories of the American College & University Presidents' Climate Commitment

Appendix B: Ursinus College Campus Map

Back to Table of Contents

Campus Map Legend

Academic & Administrative Locations

By Name

20 Baseball Field
3 Berman Museum of Art
5 Bomberger Hall
11 Bookstore
13 Campus Safety
1 Corson Hall
14 Facilities Services
5a Fetterolf House (Center for Continuous Learning)
15 Floy Lewis Bakes Center (including Helfferich Hall Gym)
7 Hillel House
25 Hunsberger Woods
10 Kaleidoscope Performing Arts Center
6 Myrin Library
4 Olin Hall
18 Patterson Football Field
8 Pfahler Hall
23 Practice Field (North)
17 Practice Field (South)
16 Ritter Center
19 Snell Field Hockey Field
24 Soccer and Lacrosse Field
22 Softball Field
21 Tennis Courts
9 Thomas Hall
2 Unity House
12 Wismer Center

By Number

1 Corson Hall
2 Unity House
3 Berman Museum of Art
4 Olin Hall
5 Bomberger Hall
5a Fetterolf House (Center for Continuous Learning)
6 Myrin Library
7 Hillel House
8 Pfahler Hall
9 Thomas Hall
10 Kaleidoscope Performing Arts Center
11 Bookstore
12 Wismer Center
13 Campus Safety
14 Facilities Services
15 Floy Lewis Bakes Center (including Helfferich Hall Gym)
16 Ritter Center
17 Practice Field (South)
18 Patterson Football Field
19 Snell Field Hockey Field
20 Baseball Field
21 Tennis Courts
22 Softball Field
23 Practice Field (North)
24 Soccer and Lacrosse Field
25 Hunsberger Woods

Residence Halls

By Name

C 201-203 Ninth Avenue
Z 30-32 Sixth
NN 424-426 Main
MM 444 Main
S 624 Main
P 702 Main
F 732 Main
I 777 Main Street
B 942 Main Street
A 944 Main Street
KK Barbershop (476 Main)
AA Beardwood Hall
O Brodbeck Hall
LL Clamer Hall (409 Main)
D Cloak House (811 Main)
II Commonwealth (500 Main)
M Curtis Hall
U Duryea Hall (612 Main)
G Elliott House (785 Main)
FF Fetterolf House (554 Main)
X Hobson Hall (568 Main)
E Isenberg Hall (801 Main)
HH Kelgwin Hall (513 Main)
GG Maples Hall (512 Main)
W Musser Hall (23 Sixth)
JJ New Hall
EE North Hall
R Olevian Hall
K Omwake Hall (701 Main)
BB Paisley Hall
L Reimert Hall
DD Richter Hall
Q Schaff Hall
V Schreiner Hall (600 Main)
XX Sprankle Hall
CC Stauffer Hall
Y Sturgis Hall (26 Sixth)
H Todd Hall (724 Main)
J Wicks House (716 Main)
N Wilkinson Hall
T Zwingli Hall (620 Main)

By Letter

A 944 Main Street
B 942 Main Street
C 201-203 Ninth Avenue
D Cloak House (811 Main)
E Isenberg Hall (801 Main)
F 732 Main
G Elliott House (785 Main)
H Todd Hall (724 Main)
I 777 Main Street
J Wicks House (716 Main)
K Omwake Hall (701 Main)
L Reimert Hall
M Curtis Hall
N Wilkinson Hall
O Brodbeck Hall
P 702 Main
Q Schaff Hall
R Olevian Hall
S 624 Main
T Zwingli Hall (620 Main)
U Duryea Hall (612 Main)
V Schreiner Hall (600 Main)
W Musser Hall (23 Sixth)
X Hobson Hall (568 Main)
XX Sprankle Hall
Y Sturgis Hall (26 Sixth)
Z 30-32 Sixth
AA Beardwood Hall
BB Paisley Hall
CC Stauffer Hall
DD Richter Hall
EE North Hall
FF Fetterolf House (554 Main)
GG Maples Hall (512 Main)
HH Kelgwin Hall (513 Main)
II Commonwealth (500 Main)
JJ New Hall
KK Barbershop (476 Main)
LL Clamer Hall (409 Main)
MM 444 Main
NN 424-426 Main

Appendix C: Ursinus College Sustainability History

Back to Table of Contents

The table below shows the history of sustainability programming at the College, however, it does not reflect the many programs, courses, and actions taken throughout the College which have a positive impact on our ecological footprint or our educational efforts.

History of Sustainability Programming at Ursinus College

Date	Type	Event
2000	Academic Program	The Ursinus College Environmental Studies (ENV) curriculum was established in January 2000 by a committee of Ursinus faculty interested in promoting environmental pedagogy. These faculty members all taught classes that fell within the Environmental Studies discipline. Collectively, their courses, with the addition of a new introductory class, were organized to form the ENV major and minor. The founding faculty each had full-time appointments in departments other than ENV, and contributed courses to the Environmental Studies major and minor which were cross-listed between their home departments and ENV.
2002	Faculty Hire	Richard Wallace, the first full-time faculty member in ENV, was hired to serve as director (later department chair) and build a program around the major. Dr. Wallace was the first of what is now three full-time tenure-track faculty hires in Environmental Studies since the establishment of the major. His work focuses on policy and programs that protect biological diversity and sustainable agriculture.
2002-current	Speakers	The Environmental Speaker Series was initiated. Speakers have included Wendell Berry, Francis Moore Lappé, Anna Lappé, Scott Weidensal, Stephen Schneider, and others.
2003 (sp)	Recycling	ENV 100 class researched and convinced the administration to start a recycling program on campus. After that a student committee overseen by ENV faculty, was responsible for collecting the green bins on campus. In late 2008 or 2009, it became the responsibility of Housekeeping because it had grown so large…and as such became part of the infrastructure of the college.
2002	Students	Students in the Environmental Studies Department began a student recycling committee, called UC Recycles. internship program, called Sustain UC, that enabled students to pursue projects in sustainability and recycling.
2003 (fall)	Garden	The organic garden initially conceived and planned by students/faculty.
2004??	Membership	Ursinus College became a member of Pennsylvania Environmental Resource Consortium (PERC).
2004 (spring)	Garden	The Ursinus Organic Garden was established through the efforts of a student/faculty collaboration as an initiative of the College.
2004	Faculty Hire	A second Environmental Studies faculty line was approved in 2003 and Leah

		Joseph was hired in 2004. Dr. Joseph's work focuses on climate change through analysis of deep sea sediment.
2004	Stormwater Basin	The Ursinus naturalized stormwater basin (also known as the constructed wetland) was conceived by a student as part of an ENV course. It evolved into a Summer Fellows and then an Honors project for a student. It was presented to and approved by the College administration.
2004 - current	Policy & Program	The College committed to purchasing Energy Star appliances. The Facilities Services Department has also upgraded lighting across campus, installed motion sensors in most classrooms and academic offices, conducts a light bulb exchange for CFLs, has installed variable speed drives on A/C units, uses Vending Miser programs for vending machines, manages parking lots for energy efficiency, uses green carpeting and low VOC paints, and purchased high efficiency laundry machines, among many other actions.
2005-current	Outreach	The Environmental Studies Department sponsors an annual Environmental Roundtable event with Senator John Rafferty (44th District).
2005 (summer)	Garden	The Ursinus Organic Garden had its first growing season.
2006	Student Leadership	UC Recycles was transformed into Sustain UC – a student fellowship program with students working on a variety of sustainability programs.
2007	Membership	Ursinus College became a member of the American Association for Sustainability in Higher Education (AASHE).
2007 (fall)	Stormwater Basin	Engineering and landscaping for the Naturalized Stormwater Basin was completed.
2007	Climate	President John Strassburger signed the American College and University Presidents' Climate Commitment (ACUPCC), committing the College to creating a plan to become carbon neutral.
2007	Program	The College formed a temporary Sustainability Committee.
2007	Policy	The College began implementing a policy to build new structures to LEED Silver construction standards.
2008	Move-In	The first Move-In event (recycling of cardboard primarily) was run by a student. This program grew into one supported by the Office of Sustainability.
2009 (fall)	Move-In	Move-In oversight shifted from an ENV class to sustainability staff. Students continue to help coordinate this initiative.
2007	Green Roof	A green roof project (proposed and run by a student) was installed on the roof of our largest science building. This pilot program is still functioning and has allowed our facilities staff to become more familiar with how green roofs function. This project has been used by students to conduct research.
2008	Faculty Hire	The third Environmental Studies faculty line was approved in 2006 and Patrick Hurley was hired in 2008. Dr. Hurley's work focuses on political ecology and human interactions with the natural world.
2008 (sp)	Climate	The College hosted a four-day conference-style event as part of the national Focus The Nation event about global climate change and solutions to which campus and public were invited and attended, led by ENV faculty members, but with help and support of many faculty and staff members across campus. This multi-day conference featured 21 different speakers and events around the topic of climate change.
2008 (spring)	Climate	Environmental Studies students conducted the first GHG inventory, as required by the ACUPCC. This was conducted as part of a course.
2008	Climate	President John Strassburger committed Ursinus College to hiring a Summer

(summer)		Fellow to work on the college's annual greenhouse gas inventory.
2008 (fall)	Stormwater Basin	A planting and maintenance plan for the Ursinus naturalized storm water basin (constructed wetland) was completed by a contractor and implemented by the Facilities Services Department.
2008	Bikeshare	A student cycling enthusiast worked with the College to start a student bike sharing program, called UCBikeshare.
2009	Recycling	The College began participating in the national Recyclemania contest.
2009	Climate	The College's first unofficial Climate Action Plan (CAP) was completed by students as part of the ENV Senior Seminar. This plan led to many changes being undertaken by the Facilities Service Department. It was never submitted for ratification by the College.
2009 (spring)	Hire	A part-time position of Sustainability Coordinator was created in March, 2009. Kyle Rush was appointed to this position. Environmental Studies faculty had requested a full- or part-time sustainability coordinator to act as liaison between students, faculty, and staff in promoting stewardship and leadership projects and initiatives on and off campus.
2009	Energy	Energy monitoring equipment was purchased for installation in all campus buildings.
2009	Dining	Wismer Dining Hall began its existing composting program.
2009 (fall)	Dining	Wismer Dining Hall installed a tray-less system for handling food service.
2010	LEED construction	The addition to the Berman Art Museum was built to LEED Silver standards (though not certified).
2010	Green Roof	The Berman Art Museum addition included a green roof. Though primarily an art installation, the green roof is an excellent educational tool about environmental efforts on campus.
2010 (spring)	Move-Out	The first large-scale Move-Out event was held. Move-Out was conceived as a project by students in an Environmental Studies capstone course on Waste as a Resource (now called Talking Trash) and coordinated with the SPC.
2010 (fall)		ENV capstone students complete analysis of campus landscape management, making recommendations about future changes to campus (e.g., native species enhancements, expanded edible landscaping). Recommendations incorporated within newly completed Master Tree Plan.
2010 (fall)	Staff	A part-time position of Sustainability Program Coordinator (SPC) was established to handle increasing program demands. This position was filled by Maryanne Berthel ('10). This position reported to ENV.
2010 (fall)	Staff	A part-time position of Climate Action Manager (now Campus Sustainability Planner) was established to address the commitment made to the ACUPCC. This position was/is filled by Shannon Spencer. This position reported to Facilities.
2010	Program	The UC Bikeshare program came under the umbrella of the Sustainability Program. Bikeshare provides bicycles to campus community members. The program was student run and was previously housed in ResLife.
2011 (spring)	Program	The College agreed to change the designation of the sustainability program to the Office of Sustainability (OS).
2011 (spring)	Program	The OS submitted its first combined budget. This streamlined budget items from multiple College departments, including ENV, Residence Life, and the President's budget.
2011 (spring)	Climate	2009-2010 GHG Inventory was completed. This was undertaken by a Summer Fellows student with oversight by Leah Joseph, Environmental

		Studies Department Chair, and Shannon Spencer, Climate Action Manager.
2011	Climate	A new organizational structure was approved for the Climate and Sustainability Action Plan, involving separate chapters for each administrative unit at the College, with the goal of facilitating implementation in mind.
2011 (spring)	Advertising	The first issue of the UCGreen Connection newsletter was published.
2011 (spring)	Staff	The College made a further commitment to sustainability by making the SPC position into a full time position.
2011	Staff	Facilities Services tasked one person, Mike Degler, with handling recycling. He worked with the SPC in the OS.
2011	Events	First Sustainability Week event held (to date, this has not been repeated)
2012 (spring)		Final plan and recommendations for the creation of a campus ethnobotany garden are completed. Garden installation awaiting funding.
2012 (sp)	Staffing	First SPC left the College; replacement hiring process began summer of 2012.
2012	Organizational	The OS was shifted into the Facilities Services Department. Both OS staff members now report to Andrew Feick, Director of Facilities Services.
2012 (fall)	Staff	Brandon Hoover was hired to fill SPC position.
2013	Education	The first 1-credit course for Sustainability Fellows was offered by the Office of Sustainability in conjunction with ENV.
2013 (spring)	Grounds	First online map of campus urban forest, highlighting ecosystem services and cultural values, completed by ENV student as part of independent research project.
2013 (sp)	Energy	The first Mock Energy Bills were created and distributed to residents of our Main Street houses as an educational campaign to raise awareness of energy use on campus.
2013	Climate	The Climate and Sustainability Action Plan was completed for review by President Bobby Fong.
2014	Energy	Real-time energy monitoring software expected to go online for students to use for educational purposes.

Appendix D: UC - Sustainability Initiatives List

Back to Table of Contents

Sustainability initiatives on the Ursinus College campus, by type or sector.

Sector	Sustainability Activity	Who is Responsible	Dept
Building	Energy - Reduce VFDs - various buildings; some with AHU	Facilities - Andrew Feick	Fac
Events	Initiative - Greeks Go Green	Senior Seminar Class Project	Var.
Educ.	UC Organic Farm	Office of Sustainability	OS
Building	Green Building - Berman Addition LEED silver	Facilities - Andrew Feick	Fac
Building	Green Building - Green Roof on Berman Museum	Facilities and ENV	Fac/ENV
Building	Green Building - green roof on Wismer (outside of dining area)	Facilities - Andrew Feick	Fac
Building	Policy - Green building - UC commitment that all major renovations will be built to LEEDS standards	Facilities; Administration	Fac
Educ	Education - Courses (see separate list of sustainability-related courses)	ENV faculty: Patrick Hurley, Leah Joseph, and Rich Wallace	ENV
Educ	Education - Speaking about ENV Studies topics at student/parent orientations, with dorm Ras, at alumni events	OS, ENV Faculty & staff	ENV
Educ	Education - Eco-Art - bringing sustainable artists on campus	Various Art Dept., Berman	Art
Educ	Event - Energy management competition in dorms	OS	OS
Educ	Event - Environmental Art Award	ENV faculty: Patrick Hurley, Leah Joseph, and Rich Wallace	ENV
Educ	Event - Environmental Roundtables with Senator John Rafferty	ENV	ENV
Educ	Event - Environmental Speaker Series (Anna Lappe, Frances Moore Lappe, Manny Howard, Katie Tripp, Scott Wiedensaul, Douglas Tallamy, etc.	OS and ENV faculty	ENV
Educ	Event - Focus the Nation (Climate Change Conference)	ENV: Rich Wallace, Leah Joseph	ENV
Educ	Event - Food-leftovers scraped and weighed over the course of a week (3/day).	ENV	ENV

Educ	Event - Just Food	OS	ENV
Educ	Event - Local Food Banquet	Rich Wallace, Food, Society & Envt class members	ENV
Educ	Event - Recycled Art & Presentations	ENV, Art, Psychology	ENV
Educ	Event - Tree planting on campus	Facilities & various departments	Var.
Educ	Event - Unplugged program	OS	OS
Educ	Habitat - Bat houses installed/maintained	ENV & facilities	ENV
Educ	Habitat - Bird Houses	ENV - Rich Wallace	ENV
Educ	Initiative - Student "service hours" working the garden/wetland/recycling program	UCARE	UCARE
Educ	Initiative – Sustainability Fellows	OS	OS
Educ	Initiative - EcoReps	OS	ENV
Educ	Initiative - UCEA	Student organization	Student
Educ	Organic Farm	OS - Farm Director (student)	OS
Educ	Organic Farm - Bee Keeping	OS – Farm Director (student)	OS
Educ	Organic Farm - chickens	OS – Farm Director (student)	OS
Educ	Organic Farm - Orchard	OS – Farm Director (student)	OS
Educ	Personnel - faculty and staff hired with sustainability as part of their job responsibilities	OS and various	OS
Educ	Policy - Presidents' Climate Commitment Signatory	President of College & OS	Admin
Educ	Research - Biodiesel converstion of vehicles -found Mercedes worked - VW didn't	student	ENV
Educ	Research - Faculty (see list)	various	Var.
Educ	Research - Reducing Pesticides in Agriculture	Biology: Cory Straub	Bio
Educ	Research - Climate Change Perspectives Survey	Bruce Rideout	Psych
Educ	Signage at major Sustainability initiative sites (garden, wetland, green roof)	OS & Facilities - Andrew Feick	Fac
Elec	2x Electricity Grid Emergency Response	Facilities	?
Elec	Energy - A/C - variable speed drives	Facilities - Andrew Feick	Fac
Elec	Energy - CFC Replacement Program	Facilities - Andrew Feick	FAC
Elec	Energy - efficiency - motion sensors on lights in bathrooms, offices, classrooms, dorm rooms?; AHU VFDs?; winterize A/C; lighting study in gym; flourescent & LED lights, etc	Facilities - Andrew Feick	Fac
Elec	Energy - Light bulb exchange	Facilities	Fac

Elec	Energy - Vending Miser in vending machines	Facilities - Andrew Feick	Fac
Elec	Energy - West Parking Lot - closed at times to save energy	Facilities	Fac
Elec	Policy - UC committed to replacing outdated appliances with Energy Star certified efficient models, when available	Facilities	Fac
Elec	Purchase - carpet green (Cool Carpets)	Facilities	FAC
Elec	Purchase - Energy Star - replace outdated appliances with more efficient energy star models	Facilities - Andrew Feick	Fac
Elec	Purchase - Increased Laundry Efficiency with machines that use 1/3 of energy and water	Facilities	FAC
Elec	purchase - LED lights for outdoor walking lights (last 10x longer than flourescents)	Facilities - Andrew Feick	Fac
Elec	Purchase - Printers replaced to be more efficient	Facilities	FAC
Elec	Purchase - updates in science buildings (e.g., fume hoods)	Facilities	FAC
Food	Composting - area behind New Hall	Facilities	FAC
Food	Composting - food	Dining Services	
Food	Composting - Ucompost	OS/Students - UCompost Volunteer Team and Supervisors (not currently functioning)	OS
Food	Organic Dinner	SIFE	Food
Food	Organic Dinner benefitting WWF	Greeks Go Green	Food
Food	Energy - Trayless Dining Hall (Implementation)	Dining Services, Facilities	Food
Food	Research - Trayless Dining Hall (Research Project)	Dining Services, Facilities	Fac
Food	Wismer on Wheels?	UCARE	
Grounds	Green Building - Green Roof Maintenance	Facilities and ENV	
Grounds	Habitat - Constructed Wetland	Facilities	
Grounds	Habitat - Wetland cleanup by Frat	Fraternity	
Grounds	Athletic fields dressed with compost instead of topsoil	Facilities - Andrew Feick	Fac
H&C	Energy - efficiency - boiler tune-up	Facilities - Andrew Feick	Fac

H&C	Energy - Heating - conversion of many Main St. houses to natural gas from oil over last several years (2009)	facilities	Fac
H&C	Energy - Insulation in ceilings & walls	Facilities - Andrew Feick	Fac
H&C	Energy monitoring meters w/ visual system purchased for all buildings	Facilities - Andrew Feick	Fac
H&C	Energy - Offset purchases (same as power purchase agreement?)	ENV	ENV
H&C	Energy - Thermostats - updated to electric & separate for each room to take into account windows left open	Facilities	Fac
H&C	Purchase - energy efficient windows (as needed/able)	Facilities	FAC
H&C	Purchase - Water savers: Low flow toilets/shower heads/faucets. Moving to power assist toilets	Facilities	Fac
Outreach	Event - Earth Day	UCEA/OS	ENV
Outreach	Organic Farm at Collegeville Farmers' Market	OS	OS
Outreach	Outreach - Bullfrog Creek Restoration Project (with Lower Salford Township and PWC)	ENV - Rich Wallace	ENV
Outreach	Outreach - CISPES - El Salvador water testing at mining site	Christian Rice	UCARE
Outreach	Outreach - Climate Club at Springford Elementary	Leah Joseph (a project of the Global Climate Change class)	ENV
Outreach	Outreach - DEP Air monitoring	Leah Joseph	ENV
Outreach	Outreach - Owl Banding	UCEA	ENV
Outreach	Outreach - Partnership with Farmers' Market Steering Committee	Rich Wallace - class; Foods, Society, and the Envt	ENV
Outreach	Outreach - PWC Watershed Cleanup	Leah Joseph	ENV
Outreach	Outreach - Sustainable Landscape/Senior Seminar	Patrick Hurley & Senior Seminar Students (ENV 470w)	ENV
Outreach	Outreach - OS Website	OS	OS
Transport	Coordination of bus schedules for athletic teams	Athletics Dept	Athletics
Transport	Policy - Local purchasing	Business Office	BO
Transport	Purchase - Biodiesel and electric powered vehicles for Facilities	Facilities	FAC
Transport	Purchase - Campus Safety replace with electric cart	Facilities/Campus Safety	FAC
Transport	Purchase - electric golf cart for environmental studies department and OS	ENV & Facilities	ENV

Transport	Purchase - Local Food Sources	Dining Services	Food
Transport	Purchase - local purchasing (Lamp posts bought locally - Spring City; other??)	Facilities	Fac
Transport	Purchase/Lease - hybrid cars for Admissions/ administrative use	Facilities	FAC
Transport	Transport – UC Bikeshare Program	OS	OS
Transport	Transport - Philly Car Share	Student Activities Office	SAO
Transport	Transport - Ride Share Program	Student Activities Office	SAO
Transport	Transport - Shuttle Bus	Residents Life/SAO office	SAO
Transport	Transportation - drinking water tanks provide filtered tap water rather than using transported plastic or glass water bottles	Dining Services	dine
Waste	Composting - cardboard (used to recycle)	Facilities - Andrew Feick	Fac
Waste	Composting - Compostable "plastic" spoons Wismer	Dining Services	
Waste	Composting - Compostable bowls Wismer	Dining Services	
Waste	Event - Recycle team move in/move out	Sustainability Fellows/OS	OS
Waste	Event- Recyclemania	SIFE, Sig Pi	
Waste	Policy - Computer packaging more sustainable - Dell	Env; facilities	Fac
Waste	Policy - Garbage contract - renegotiated	Facilities	FAC
Waste	Policy - Inclusion of sustainability concepts within contracting (i.e., waste, housekeeping)	Business Office	BO
Waste	Policy - No More plastic bottles sold on campus (not a currently functioning initiative)	President	PRES
Waste	Purchase - green cleaning products, chemicals, etc.	Housekeeping	House
Waste	Purchase - Recycled paper - business cards	Facilities	FAC
Waste	Purchase - Recycled Paper use (30% + FSC)	Facilities	FAC
Waste	Purchase - recycled toilet paper	Housekeeping	House
Waste	Purchase - vinyl flooring over carpet (which is thrown out annually)	Facilities	FAC
Waste	Recycling - bottles & cans	Facilities	FAC
Waste	Recycling - cardboard	Facilities	Fac
Waste	Recycling - Mixed	Facilities	Fac

Waste	recycling - paper - Sig Pi		
Waste	Recycling - paper (extended to dorms)	Facilities	FAC
Waste	Recycling - Plastics 1-7	Facilities/OS	FAC/OS
Waste	Recycling - Rechargeable Batteries, Flourescent & other specialty Lamps	Facilities	Fac
Waste	Recycling - technology	Technology Services	Tech
Waste	Recycling -Newspaper		
Waste	Waste - compacter to be installed to reduce the number of wast pick-ups	Facilities?	FAC
Waste	Waste - Oil sold for biofuel	Facilities	Fac
Waste	Waste - Pelletized organic fertilizer on fields from composted product	Facilities - Andrew Feick	Fac
Waste	Waste - Pesticides - integrated pest management focuses pesticide application only to trouble areas - not everywhere)	Facilities	Fac
	Education - Red & Gold Day	OS	OS
	Funding - Grant proposals written (unfunded) to Chiller PEDA, LOI greenroof, Energy Harvest LED lights (PEDA too?)	ENV/OS/Facilities	ENV
	Initiative - Carbon Inventory	OS	OS
	Initiative - President's Climate Commitment - Implementation	OS	OS
Waste	Shipped old/unused furniture to Haiti in partnership with IRN	Facilities - Andrew Feick	Fac

Appendix E: Ursinus' Academic Course Listings for Sustainability Related Courses

Back to Table of Contents

This appendix includes a list of courses offered in our catalogue that cover topics related to sustainability. They include courses from the following academic departments: Environmental Studies, Anthropology, Business & Economics, Biology, Chemistry, English, Philosophy, Political Science, Psychology, Sociology, and French.

Course listings for sustainability-related topics at Ursinus College

ENV-100 **Issues in Environmental Studies(**Faculty) An introductory interdisciplinary course with readings and research on topics across all fields of environmental studies. This course examines environmental issues through many lenses, including ecology, economics, ethics, policy analysis, and the arts. Issues explored include (but are not limited to) population, energy, biodiversity and ecosystem conservation, food and agriculture, global warming, ozone depletion, air pollution, water resources management, and solid waste. Student projects include investigations of local environmental issues and applied conservation activities within the Ursinus and surrounding communities. Open to first-year and sophomore students or others by special permission of instructor. Four hours per week. Four semester hours.
ENV-268 **Wetlands** (Faculty) An exploration of the features common to all wetlands, the great variety of wetlands that exist due to differences in climate and geomorphology, and the many ways in which humans are connected to wetlands. Weekend field trips to area wetlands will broaden our view of regional types and increase awareness and appreciation of the vital role wetlands play. Prerequisite: ENV 100 or permission of the instructor. Offered every other year. Three hours of lecture per week plus three or four, one-day, weekend field trips. Four semester hours.
ENV-272 **Marine Mammal Conservation and Management** (Dr. Wallace) This course addresses historical and current issues concerning the conservation and management of marine mammals, their habitats, and related marine resources. It integrates the biological sciences, policy, law, economics, and humanities (in the form of ethics and values) in presenting and engaging the students in discussions about the history of human-marine mammal interactions, changes in human values and attitudes about the marine environment, the role of human-marine mammal interactions in societal changes, and the policy arena that has developed around marine mammals in the past century. Prerequisite: ENV-100. Three hours per week. Four semester hours.
ENV-299 **Readings in Environmental Studies** (Faculty) Individual study and directed reading of a particular topic or book within the discipline. Students will work closely with a member of the ENV faculty in selecting, reading, and discussing the topic, and in determining a proper written assignment. Prerequisites: ENV-100 and permission of the instructor. One semester hour.
ENV-332 **Urbanization & the Environment** (Dr. Hurley) An introduction to the diversity of environmental transformations that accompany the process of urbanization and their implications for urban sustainability through exploration of the historical, political, social, economic, and ecological dimensions of the human-environment interactions .Field trips to local neighborhoods, nearby towns, and sites in Metropolitan Philadelphia are required. Prerequisite: ENV 100 or permission of the instructor. Offered every other year. Three lecture hours per week. Four semester hours.
ENV-336 **Environmental Planning** (Dr. Hurley) An introduction to a diversity of conceptual approaches in the field of environmental planning and management, including smart growth management, regional planning, land-use planning, collaborative planning, natural hazard mitigation, conservation planning, and watershed management. Field trips in the Philadelphia region will occur. Prerequisite: ENV 100 or permission of the instructor. Offered every other year. Three lecture and three laboratory hours per week. Four semester hours.
ENV-340W **Food, Society, & the Environment** (Dr. Wallace) Few issues are as complex and interdisciplinary as what we eat. The seemingly simple every-day choices we make about our food have repercussions far beyond our diets and wallets. We will explore the food systems in which we live from many different perspectives to achieve an understanding of what food and food decisions mean in terms of personal health, welfare, and budgets, and in the context of society, economy, and sustainability. Written and oral communication of critical thinking is emphasized. Sophomores and above welcomed. Prerequisite: ENV-100. Three hours of lecture plus three hours of field or lab work per week. Four semester hours.
ENV-342 **Globalization & the Environment** (Dr. Hurley) An examination of the cultural, political, and economic linkages that characterize globalization and the consequences these linkages (e.g. through consumption practices) have for specific

places, diverse peoples and cultures, and the environments where they live. Students will examine specific cases from Africa, South America, East and Southeast Asia, and Australia. Prerequisite: ENV 100 or permission of the instructor. Offered every other year. Three lecture hours per week. Four semester hours. (G.)

ENV-350 **Topics in Environmental Studies** (Faculty) A study of a contemporary issue or specific subject area relating to the environment. Topics are often cross-disciplinary and vary according to the special interests of students and faculty. Potential topics include: energy and the environment; landscape architecture; urban environmental studies; and birds in their habitats. Prerequisite: permission of the instructor. Independent written work required. Lab and field work required in some cases. Three hours of class per week. Four semester hours.

ENV-360 **Conserving Biological Diversity** (Dr. Wallace) A study of the conservation of biological diversity in the United States and abroad. Interdisciplinary analytical methods are used to investigate the loss and conservation of wildlife and habitats, with an emphasis on the development of conservation policy in the United States and comparative international case studies of endangered species protection. Specific topics include current trends in global biodiversity loss; the role of human values in biodiversity conservation; international biodiversity conservation strategies, initiatives at zoos and aquariums; and the protection of forests, rangelands, oceans, and coastal zones, birds, fish, marine mammals, and endangered species in the United States. Prerequisite: ENV-100. Three hours per week. Four semester hours.

ENV-362 **Managing Parks & Protected Areas** (Dr. Wallace) A study of strategies for managing parks and protected natural areas locally and internationally. Emphasis is on learning the interdisciplinary tools necessary for developing management plans and implementing protected area policies. Case studies will address issues such as urban and suburban sprawl, pollution, natural resource extraction, biodiversity conservation, and the rights and concerns of indigenous peoples. Local field trips will supplement in-class learning by exposing students to protected areas studied in the classroom. Prerequisite: ENV-100. Three hours of lecture plus three hours of field work per week. Four semester hours.

ENV-364 **Ecosystem Management (**Dr. Wallace) Sustainability is an important social goal, but learning how to achieve it at large scales is challenging and complex. This course examines the conceptual and contextual basis for managing and conserving nature at the ecosystem level. We will explore methods and theories for large-scale conservation, discuss how science, management, and policy are integrated in these efforts, apply problem solving methods to the challenges of large scale conservation, and investigate cases from the terrestrial and marine environments. Prerequisite: ENV-100. Three hours per week. Four semester hours.

ENV-366 **Ecological Change in Historical Perspective** (Dr. Hurley) An introduction to longer-term perspectives on human-environment interactions, drawing on approaches found within environmental history, historical ecology, and historical geography. Particular emphasis is placed on case studies from North America and on regional ecosystems in the Eastern United States. Saturday or Sunday field trips to regional sites are required. Prerequisite: ENV 100 or permission of the instructor. Offered every other year. Three lecture hours per week. Four semester hours.

ENV-370 **Global Climate (**Dr. Joseph) This course focuses on the science of climate, investigating what climate is and what factors determine and influence the climate of an area. Both the natural and anthropogenic (human) forces that may cause climate change are presented from a geological and historical perspective in addition to covering current climatic trends and predictions for future climate. Prerequisite: ENV-100 or permission of the instructor. Offered every other year. Three hours of lecture and three hours of laboratory per week. Four semester hours. (LS.)

ENV-372 **Environmental Issues in Oceanography** (Dr. Joseph) An introduction to the basic scientific concepts of oceanography, focusing on the aspects of oceanography that affect and are affected by humans. Topics include plate tectonics, properties of seawater (chemical and physical), coastal processes (coastal erosion, tsunamis, hurricanes), the effects of/on the ocean in climate change, el Niño/la Niña, the ocean as a resource (fisheries, mining), and pollution of the ocean (ocean dumping, mercury, and oil spills). Saturday or Sunday fieldtrips may be required. Prerequisite: ENV-100 or permission of the instructor. Offered every other year. Three hours of lecture; three hours of laboratory per week. Four semester hours. (LS.)

ENV-381A **Internship (**Faculty) An off-campus academic/work experience under the supervision of a faculty internship advisor and an on-site supervisor, comprising between 120 and 159 hours of work during the course of the internship. Students must have completed 12 semester hours of environmental studies courses including ENV-100 and have permission of the supervising faculty member to be eligible for an internship. Students must document their experience according to the requirements delineated in the College catalogue section on Off-Campus Study. Graded S/U. Three semester hours. (I.)

ENV-381B **Internship (**Faculty) An off-campus academic/work experience under the supervision of a faculty internship advisor and an on-site supervisor, comprising at least 160 hours of work during the course of the internship. Students must have completed 12 semester hours of environmental studies courses including ENV-100 and have permission of the supervising faculty member to be eligible for an internship. Students must document their experience according to the requirements delineated in the College catalogue section on Off-Campus Study. Graded S/U. Four semester hours. (I.)

ENV-382 **Political Ecology** (Dr. Hurley) An introduction to an interdisciplinary field of inquiry concerned with the ecological and social drivers of environmental change and their politicization. Students will explore cases representing a diversity of

ecosystems at local, regional, and national scales from a diversity of locations across the globe, including in Africa, North America, South America, and Southeast Asia. Prerequisite: ENV 100. Offered every other year. Three lecture hours per week. Four semester hours.

ENV-430W **Advanced Environmental Policy Analysis** (Dr. Wallace) An intensive seminar in methods of interdisciplinary environmental problem solving designed to improve professional development and practice in the many fields of conservation. This course will help students develop an understanding of and technical proficiency in using qualitative analytical methods. Theory and cases will address environmental concerns at the local, regional, national, and international levels. Prerequisite: ENV-100, at least one ENV synthesis course, and junior standing. Three hours per week. Four semester hours. (SS.)

ENV-470W **Environmental Studies Senior Seminar** (Faculty) This is a capstone seminar in the methodology and application of critical thinking and other applied analytical and practical skills in environmental studies. It is designed to help students learn practical problem solving skills, and the theories that underlie them, that will help them to identify, define, and analyze environmental problems and develop responses to them. The seminar is designed to provide a synthesis experience for environmental studies majors and will entail group and individual work on a semester-long project. Project-related work will draw from the natural and social sciences as well as from ethics and the study of rhetoric. Prerequisites: ENV-100, junior or senior standing, and at least three additional ENV courses. This course fulfills the ENV capstone and oral presentation requirements. Three hours per week. Four semester hours.

ENV-481W **Research/Independent Work** (Faculty) An independent project conducted using research methods in environmental studies, and including original work in the field, laboratory, or other scholarly forum. Students must have completed 12 semester hours of environmental studies courses including ENV-100 or have permission of their adviser to be eligible for independent research. Four semester hours. (I.)

ENV-482W **Research/Independent Work** (Faculty) See course description for ENV-481W. Four semester hours. (I.)

ENV-491W **Research/Independent Work** (Faculty) Students who are eligible for departmental honors can complete independent research work in this course. Work should be comprised of an independent project conducted using research methods in environmental studies, and including original work in the field, laboratory, or other scholarly forum. Students must have completed 12 semester hours of environmental studies courses including ENV-100 or have permission of their adviser to be eligible for independent research. Four semester hours. (I)

ENV-492W **Research/Independent Work** (Faculty See course description for ENV-491W. Four semester hours. (I)

ENV/ANTH-352. **Peoples & Their Environment** (Dr. Oboler) Human cultural patterns and social institutions are adaptations to particular physical and social environments, and also have impacts on those environments. This course is concerned with the relationship between environments and subsistence systems on the one hand, and social/political institutions and belief systems on the other, using case studies from a variety of traditional societies. We will also consider the relationship between the global ecosystem and problems of Third World development, patterns of peasant production, causes and consequences of rapid population growth, and the fate of indigenous peoples. Prerequisites: ANTH-100 or permission of the instructor. Three hours per week. Four semester hours. (SS.)

ENV/BE-213. **Economics of Environment and Natural Resources (**Dr. Randall) Economic analysis is used to inform, analyze, and evaluate current environmental and natural resource policy decisions. Analyses of environmental problems use cost-benefit or efficiency criteria. Topics include externalities, public goods, common property rights, and sustainability. Prerequisite: BE-100. Three hours per week. Four semester hours. (SS.)

ENV/BIO-215 **Biology of Maya Mexico (**Dr. E. Dawley, Dr. R. Dawley) A study of the environments, fauna, and flora of tropical Mexico and their relation to the Maya people who inhabit that region. We will examine coral reefs, coastal waters, and lowland and highland forests, focusing on animals and plants of particular importance to the ecosystem they inhabit and to the Maya people, past and present. Prerequisite: None. Field investigations accompanied by readings, lectures, and an independent project resulting in a review or research paper. Four semester hours. (This course is part of the UC in Maya Mexico Program.)

ENV/BIO-250 **Environmental Biology(**Dr. Sidie) A study of the biological basis of environmental issues. Includes ecosystems, communities, populations, water, energy, geologic resources, biodiversity, weather/climate, pollution, agriculture/hunger, soil resources/pests, solid/toxic hazardous waste, toxicology, land use. Prerequisite: BIO-101Q or permission of the instructor. Three hours of lecture. Three hours of lab per week. Four semester hours. (LS.)

ENV/BIO-270 **Aquatic Biology** (Dr. Goddard) A study of the path that water takes from the headwaters of a creek down to the deepest oceanic trenches plus all of the aquatic communities found along the way. Human use of freshwater and marine resources and impacts of humans on the freshwater and marine environments will be discussed. Laboratories will include studies of fish and invertebrate anatomy and taxonomy, a visit to a beach, salt and freshwater marsh, and creeks and ponds. Students must be available for two Saturday fieldtrips to estuarine and coastal habitats. Three hours of lecture; three hours of laboratory per week. Prerequisites: BIO-101 and BIO-102; or permission of the instructor. Four semester

hours. (LS.)

ENV/BIO-310 **Biological Oceanography** (Dr. Goddard, Dr. Sidie) A study of the biological bases of ocean science. Topics discussed include: ocean basins, seawater physics and chemistry, currents, waves, tides, upwelling zones, tidal rhythms in organisms, ocean habitats/biota, marine virology, marine microbiology, plankton, trophic relationships, hydrothermal vent communities, coral reefs. Prerequisite: BIO-101Q or permission of the instructor. Three hours of lecture; three hours of laboratory per week. (Course may be conducted in part at a marine field station). Four semester hours. (LS.)

ENV/BIO-320 **Biology of the Neotropics** 9Dr. E. Dawley, Dr. R. Dawley) A field study of Costa Rican tropical habitats including rain forests, montane forests, seasonally dry forests, and wetlands conducted at research sites throughout the county. Topics include diversity and natural history of key plants and animals, ecological interactions and evolutionary processes, and conservation. May include side trips to cloud forests or coral reefs. Prerequisite: Permission of instructor and BIO-101Q. Field investigations accompanied by readings, lectures, and a directed research project. Course will meet 15 hours on campus and three weeks in Costa Rica between the Fall and Spring semesters. Four semester hours. (LS.)

ENV/BIO-325 **Insect Biology** (Dr. Straub) This course will introduce students to the insects—the most diverse group of organisms on the planet. We will examine the physiology, development, behavior, ecology, and evolution of insects to better understand why they are so successful, and special emphasis will be placed on understanding the importance of insects to human welfare. Students will learn the taxonomy of local insects by completing an insect collection. The laboratory component of this course will include insect rearing, experiments, and field trips to collect insects from terrestrial and aquatic habitats. Prerequisite: BIO-101 and BIO-102; or permission of the instructor. Three hours of lecture; three hours of laboratory per week. Four semester hours. (LS.)

ENV/BIO-330 **Marine Biology** (Dr. Sidie) A field-oriented study of the important marine habitats, including pelagic and benthic zones, and intertidal communities. Topics include marine biodiversity-plants, protists, invertebrates, vertebrates; marine ecology; primary production in the sea; estuaries; plankton; nektron; marine mammals. Prerequisite: Permission of the instructor and BIO-101Q. Lecture and field investigations. (Course conducted in part at a marine field station.) Four semester hours. (LS.)

ENV/BIO-394 **Watershed Investigations & Actions** (Dr. Goddard) This course combines class time, research, and community action. Scientific and historical aspects of the Darby Creek watershed examined will include a brief survey of creek flora and fauna and physical properties (limnology), land development directly adjacent to the creek starting in the U.S. colonial period and the industries along the creek that lead to the declaration of a Superfund Site along the creek. Laboratory research is an investigation of pollution in a species of creek fish. Community action is a survey of pollution-indicator macroinvertebrate species with elementary schools throughout the watershed. Prerequisite: BIO-201W; or permission of the instructor. Two hours of lecture and 7 hours of laboratory/community action per week. Four semester hours.

ENV/BIO-415W **Ecology** (Dr. Small) Studies of the interrelationships between organisms and their environments that determine their distribution and abundance in natural systems. Aspects of energy flow, biotic and abiotic limits, population growth and community organization are considered in the context of the ecosystem. Laboratories include local field work and emphasize techniques for collecting and analyzing data. Prerequisites: BIO-101Q and 102Q and 201W, or permission of the instructor. This course fulfills the ENV capstone requirement. Three hours of lecture, three hours of laboratory per week. Four semester hours. (LS.)

ENV/CHEM-101 **Introduction to Environmental Chemistry** (Faculty) This course, intended for non-science majors, will examine selected topics in environmental chemistry through an understanding of basic chemical principles. Topics may include global warming, ozone depletion, pollution, and waste management. Three hours of lecture. Three semester hours. (LS if taken with CHEM-101LQ.)

ENV/CHEM-101LQ **Laboratory in Introductory Environmental Chemistry (**Faculty) Laboratory work related to CHEM-101. In addition to mastering basic chemistry laboratory skills, students will analyze air, water, and soil samples using a variety of techniques. Prerequisite: CHEM-101 (or concurrently). Three hours of laboratory per week. One semester hour.

ENV/ENGL-262 **The Environment in Literature (**Faculty) Students in this course will study literature inspired by a variety of environments. Readings will range from classic essays "Nature" by Emerson and "Walking" by Thoreau to Terry Tempest Williams' 1991 environmental/autobiographical study, "Refuge: An Unnatural History of Family and Place." Ecocriticism, the study of the relationship between literature and the physical environment will provide the theoretical framework for the course. Writing for the class will be half-analytical (critical responses to texts), and half-original, creative student writings about their own environments. Prerequisite: CIE-100. Three hours per week. Four semester hours. (H.)

ENV/GEOL-102Q **Geology: The Earth Around Us (**Dr. Joseph, Faculty) This course examines the current state of knowledge about the Earth and investigates the forces and processes that shape it. Topics include the formation of the Earth and solar system, the materials that comprise the Earth, the forces that currently act on, around, and within the planet, and the relationship of these forces to the processes and features we observe and/or experience at the Earth's surface. To address complex and dynamic geologic processes, this course utilizes knowledge and methods from several disciplines in addition to geology, including biology, math, physics, and chemistry. Three hours of lecture and three hours of laboratory per week.

Four semester hours. (LS.)
ENV/GEOL-105Q **Environmental Geology** Dr. Joseph, Faculty An introduction to environmental geosciences. Includes a study of the earth's environmental systems: lithosphere, hydrosphere, atmosphere, mineral resources, weathering, soils, rivers and flooding, ground water, climate, oceans and coastline erosion, energy sources, human populations, and environmental change. Three hours of lecture and three hours of laboratory per week. Four semester hours. (LS.)
ENV/PHIL-248 **Environmental Ethics** (Dr. Sorensen) The central issue in environmental ethics concerns what things in nature have moral standing and how conflicts of interest among them are to be resolved. After an introduction to ethical theory, topics to be covered include anthropocentrism, the moral status of non-human sentient beings, preservation of endangered species and the wilderness, holism versus individualism, and the land ethic. Three hours per week. Four semester hours. (H.)
ENV/POL-326 **Environmental Law** (Dr. Kane) The study of various state, national, and international legal patterns that have arisen to address environmental concerns. The environmental field will be used to examine the nature and effectiveness of civil, criminal, and administrative action to address a complicated and important social issue. Topics will include federal administrative law; international trade and environmental regulation; control of toxic substances and hazardous wastes; the impact of scientific uncertainty on regulation; federal regulatory programs; civil liability under federal regulations; citizen suits; and the preservation of natural areas. Prerequisites: POL-218 for Politics and International Relations majors or permission of the instructor. Three hours per week. Four semester hours. (SS.)
ENV/PSYC-282 **Environmental Psychology** (Faculty) Study of the interrelationship between human behavior and experience and the manmade and natural environments. Topics include: influences of weather, climate, noise, crowding, and stress; personal space and territoriality; work, leisure, and learning environments; the natural environment and behavioral solutions to environmental problems. Prerequisite: PSYC-100. Three hours per week. Four semester hours. (SS.)
ENV/SOC-220 **Environmental Justice (**Dr. J. Clark) This course will examine how the burdens of local and global environmental problems are distributed across race, class, and gender. Through the examination of local, national, and international case studies, we will gain an understanding of how the risks associated with exposure to toxic pollutants and other environmental hazards coincide with pre-existing patterns of inequality, both globally and in the United States. Close attention will be paid to the political-historical processes through which the distribution of environmental hazard has been produced, and how affected communities have resisted these processes. Prerequisite: any 100-level course in Anthropology or Sociology or permission of the instructor. Three hours per week. Four semester hours. (SS.)
ENV/SOC-285 **Environmental Sociology** (Dr. J. Clark) This course will introduce the field of environmental sociology – the study of interactions between humans, groups and the environment. Students will become familiar with a variety of theoretical frameworks for analyzing environmental problems and apply them to a range of environmental issues scaled from the local to the global. Participants will emerge with a critical ability to analyze popular accounts of environmental problems and proposed solutions with a sociological eye. Prerequisite: any 100-level course in Anthropology or Sociology or permission of the instructor. Three hours per week. Four semester hours. (SS.)
ENV/SOC-288 **Animals & Society** (Dr. J. Clark) In recent years there has been an explosion of research in the humanities and social sciences on what has come to be called the animal question. This course introduces students to the interdisciplinary field of animal studies, with a particular focus on the sociological literature. Students will emerge from the course with a nuanced sociological understanding of some of the most controversial issues raised by our relationship with other animals. Among the issues we will explore are genetic engineering, factory farming, animal experimentation, and the war on "animal rights terrorism." Prerequisite: any 100-level course in Anthropology or Sociology or permission of the instructor. Three hours per week. Four semester hours. (SS.)
ENV/SOC-290 **Science, Technology, and Society** (Dr. J. Clark) Society shapes science and technology, which, in turn, help make society what it is. This course introduces students to the interdisciplinary field of Science and Technology Studies (STS). Students will emerge from the course with a sociological understanding of science and technology. Though the course will focus mainly on biotechnology, it will give students a theoretical toolkit that will help them understand other areas of science and technology as well. Prerequisite: any 100-level course in Anthropology or Sociology or permission of the instructor. Three hours per week. Four semester hours.(SS.)
FRENCH 201 (Colette Trout) This class has a unit that focuses on notions and vocabulary in French about ecological issues. Students are informed about what was been done at UC to have a green campus. Though this course is not cross-listed with ENV, it does focus on sustainability.

Appendix F: Ursinus - Sustainable Office Guidelines

Back to Table of Contents

This is not meant to be an exhaustive list, but a set of ideas and guidelines. If you have questions or ideas to add to this list, please contact the Office of Sustainability at sustainability@ursinus.edu.

Policy & Planning

- Develop a list of actions that the department is willing to implement toward improving their sustainability, e.g., printing fewer documents, lowering their paper use, adjusting all departmental computer settings to print double sided as the default.
- Participate in the OS's Green Certification Program, once it is established.

Power Usage

- Centralize devices by plugging them into a power strip, and then turning them off at the end of the day with the flip on a single switch
- Unplug devices and appliances that you seldom use
- Reduce your use at night, over weekends, and holidays by unplugging them.
- Turn off all lighting and electronic devices when not in use.
- Get rid of energy intensive water coolers. Replace with tap water cooled in a refrigerator (or drinking fountains with bottle attachment).

Responsible Consumption

- Instead of using disposable cups (especially polystyrene), ask everyone in the office to bring in their own mug/cup to keep in the office. The mugs/cups just need to be rinsed out at the end of the party.
- Avoid the use of "hard to recycle" materials such as packaging made from StyrofoamTM (polystyrene).
- In the lunch/break room, replace disposables with reusable kitchenware (e.g., mugs, utensils, etc.) and use refillable containers for sugar, salt & pepper, etc. to avoid individual condiment packets.

- For office functions, utilize reusable kitchenware.
- If tea and coffee are provided, make sure they are Fair Trade certified and have low environmental impact (e.g., organic, shade grown, etc.)
- Reduce paper use in the bathroom (toilet paper, paper towels) using informational signage, dispensers that regulate sheet length, etc.
- Prohibit the use of bottled water for office functions.
- Reduce use of products wherever possible and implement sustainability practices in everyday operations.
- Print promotional materials with low or no-VOC inks.
- Designate a sharing and reuse area for office supplies such as binders, folders and staplers.
- If office has a water cooler with disposable cups, use paper cups that can then be recycled.

Paperless

- Whenever possible, use online filing, resources, communication, storage, document exchange. This will save money on paper, printer ink and energy use as well as saving physical storage space.
- Distribute documents digitally whenever possible (make use of scan and send options or make PDF documents and email); when printing is required, print official documents double-sided on recycled, recyclable paper
- Eliminate or redesign forms to use less paper; or switch forms (such as invoices) to electronic format.
- Design marketing and outreach materials that use less paper – such as e-newsletters.
- Conduct more meetings without paper
- For drafts and internal documents, print on previously printed paper; designate a draft printer tray; and/or reuse office paper as scratch pads.
- Send all meeting materials, including agendas, to meeting attendees ahead of time. Set the expectation that attendees will bring their computers with them, if possible, to the meeting (or ask them to let you know if they will need paper copies).

Computer Power Management

- Don’t use a screen saver

- When buying a computer, look for the ENERGY STAR label
- Turn down the brightness setting on your monitor
- Close unused applications and turn off your monitor when you're not using it
- Turn off peripherals such as printers, scanners, and speakers when not in use

Staff Education

- Incorporate sustainability into staff meeting discussions.
- Offer brown bag lunches and workshops with sustainability as a focal topic.
- Elicit staff input into greening the workplace through surveys, suggestion boxes, or other means.
- Hold an annual think tank meetings to strategize about sustainability within the department. Invite students to participate in these discussions.
- Highlight sustainability efforts on your office's website.
- Post educational information in your office space or building about steps you are taking to be a sustainable organization.
- Provide opportunities for employees to learn about greening their personal lives.
- Use signage at light switches reminding staff to turn off lights.
- Put up signs at elevators to encourage the use of stairs.
- Offer in-house training to help staff change old practices so that lights get switched off, waste is recycled/reused, etc.
- Purchase books about sustainability in your particular department. Keep the books somewhere that they can be accessed easily.
- Consider conducting training, in conjunction with Office of Sustainability staff members, around recycling. This should include what can be recycled and what the limitations of the recycling program are (contamination).

Transportation

- Calculate and track travel expenses and the related carbon footprint for each office. Determine if this travel is cost effective for the College (both monetarily and with regard to the related GHG emissions)
- Consider purchasing carbon offsets in the amount of air travel-related emissions related to faculty and staff business travel.

Appendix G: Ursinus Green Events Guidelines

Back to Table of Contents

When organizing an event, please consider adopting some or all of these "green" guidelines to help lower the impact that your event has on the Earth. Did you know that the plastic utensils that are thrown away after one use don't break down for hundreds of years? Your grandchild's grandchild's grandchild could come across a fork that you used once at a party! As an alternative, use reusable utensils, plates, and glasses and help lower your environmental impact. Below you will find guidelines for organizing and implementing "green" events. Good luck!

- Advertising
  - Print advertising for your event on recycled paper with soy-based inks.
  - Send invitations out digitally rather than printing and sending them through the U.S. mail.
  - Make information available online.
  - Allow for online RSVPs
  - Claim your glory – advertise your event as a "Green Event"
- Carbon Footprint
  - Work to decrease the carbon footprint of all campus events. This could include any of the following (or others):
    - Vegetarian food
    - Local and/or organic food
    - No plastic water bottles
    - Recycled paper in any printed materials (with a statement to that effect)
    - Reduce travel required for the event
    - Use reusable tableware and serving dishes
- Composting
  - Work with Sodexo and/or other caterers to ensure that composting takes place at your campus events.
  - Compost all food, paper napkins, paper plates.
  - Encourage guests to participate in our composting efforts. It will help us and will help them feel that they are part of our cause.

- Event goods
    - Give priority to:
        - Reusable dishes, utensils, glasses
        - Washable linens (napkins and table cloths) rather than disposable.
        - Consider serving finger food rather than foods that require utensils.
    - Rent items that you need for your event rather than purchasing and throwing them away).
    - Ban Styrofoam cups and plates from your event.
    - Use paper plates rather than recyclable plastic plates if at all possible. These can be composted.
    - Use compostable utensils rather than throw-away plastic utensils.
- Food
    - Work with Sodexo and/or other caterers to provide organically grown foods (including vegetables, meats, dairy products) whenever possible and feasible.
    - If tea and coffee are provided, make sure they are Fair Trade certified and have low environmental impact (e.g., organic, shade grown, etc.)
    - Work with Sodexo to ensure that food provided is grown on farms that are committed to protecting the human rights of their farm workers.
    - Work with Sodexo and/or other caterers to provide whole foods that are prepared by the caterer (rather than processed foods that are reheated).
    - Serve only tap water (no bottled water, which contains toxic chemicals and creates trash and/or recycling).
    - Offer water bottle refill stations (or allow guests to refill their water bottles/glasses from pitchers that are at the event).
- Recycling
    - Work with Sodexo and/or other caterers to ensure that recycling takes place at your campus events.
    - Provide recycling bins for staff to use as well as for guests.
    - Recycle all glass bottles, plastic bottles, recyclable plates and cups
    - Encourage guests to participate in our recycling efforts. It will help us and will help them feel that they are part of our cause.
- Signage at Your Event

- Post signage to clearly indicate what can and cannot be recycled. (Digital versions of this signage will be available from the Office of Sustainability's website.)

Caterer

- Request of the event caterer that recycling containers be made available at all events. Recycling bins should be larger than trash receptacles to provide a visible illustration of the campus' commitment to sustainability.
- Request of the event caterer that, for events where food is served and taken away by staff, that a composting container be provided and that food be composted by Sodexo staff. Materials put into the compost would then be added to our compost at Wismer.
- Request of the event caterer that all food-related materials used at events be reusable, compostable or recyclable.

Appendix H: Ursinus Green Purchasing Guidelines

Back to Table of Contents

The following Green Purchasing guidelines are meant to serve as a starting point. They reflect some good practices. If you have suggestions for amending this list, please email them to: sustainability@ursinus.edu

- Beginning the green purchasing process:
  - Identify one person who can help facilitate green purchasing within the department.
  - Track green purchases for future planning and assessment (set up attributes for sustainability aspects)
  - Work with the OS to find sources for materials that are needed.
  - Create a list of preferred vendors based on environmental criteria and purchase from them when possible.
  - Encourage purchasers to consider whether existing items can be used rather than purchasing new items, including sharing or renting as options.
  - Use whole life costing rather than awarding contracts on the lowest price basis.
  - Source giveaways that are recycled whenever possible, including t-shirts, reusable water bottles, pens, paper and other products.
  - Focus on purchases that involve products that have high environmental impact, are expensive, and/or are easily influenced (biggest bang for the buck).
- Before purchasing, ask:
  - Does another department have a surplus that they would be willing to share?
  - Does another department have a surplus that they are not using?
  - If there is an existing item, can it be easily/economically repaired (rather than making a new purchase)
- Prioritize purchasing products that are:
  - Locally produced
  - Locally sold by local business
  - Energy Star rated
  - Durable and well made (built to last)
  - High in recycled/reused content
  - Made from materials that are easily taken apart and are then recyclable at the end of their life

- Reusable and/or refillable
- Easily repaired (in whole or in part) rather than having to be replaced.
- Water and energy efficient
- Made from sustainably managed timber products (e.g., both Lowe's and Home Depot sell products that are certified by the Forest Stewardship Council (FSC)).
- Made from natural materials with no or low-VOC; never purchase teak or other woods that are unsustainable forested.
- Can be bulk ordered/shipped
- Shipping materials are compostable, recyclable, or reusable, and/or the vendor is willing to take back and reuse the packaging.

Appendix I: Ursinus Sustainability Projects/programs that Originated in Academic Courses

Back to Table of Contents

Sustainability projects and programs that originated in academic courses

Type of Project	Sustainability Project/Initiative
Sustainability Projects that Resulted **from** Courses (all approved by Academic Council)	• Organic Farm • Constructed Wetland • Recycling Program • Sustainable Move-In • Sustainable Move-Out • Climate Action Plan (first draft) • Greenhouse Gas Inventory (first year) • Green Roof project on Pfahler • UCompost – residential hall composting (this program is not currently functioning) • Trayless System in the dining hall • Reduced packaging in the Dell laptop shipments; bundling of computers; switch from Styrofoam packaging to compostable bamboo packaging • Development of Science in Motion curriculum on Climate Change for students at local schools • Hunsberger Woods Restoration Plan – project that allowed the College partnered with the local government and NGOs. Included tree planting, rain garden creation, stream restoration. • American Chestnut Foundation Partnership to plant a research orchard of chestnuts. Part of program to develop blight resistant chestnut trees. (This project has not yet been implemented) • Local foods banquet • Plastic water bottle free campus policy (Though this is no longer the case on campus, we are working toward

	reducing the number of disposable plastics used on campus.) • Climate Action Club in Springford School District. • ENV has worked with the Facilities Services Department to expand the student-run organic farm to include an orchard, fruits/vegetables, bees, chickens, a community garden, and a stall at the local Farmers' Market. • ENV faculty is working with the Facilities Services Department to design and implement an an ethnobotany garden on campus, possibly starting in one of our existing planting beds. • Tree planting on campus • Tree mapping project for campus. • Bat & bird houses installed and maintained • Organic Dinners* • Environmental Speaker Series. This is run by faculty who bring in speakers during the academic year. Past speakers include: Wendell Berry, Anna Lappe, Frances Moore Lappe, Manny Howard, Katie Tripp, Scott Wiedensaul, and Douglas Tallamy, among many others.
Sustainability Projects that Continue to be Used in Academic Courses	Recycling program Composting Organic Farm Hunsberger Woods Restoration Plan Ethnobotany garden Farmers' Market Constructed Wetland
Courses that Incorporate Sustainability Concepts	There are over 45 courses offered in the UC curriculum in 11 departments that address sustainability in some way. (see complete list of sustainability-related courses in Appendix E).

Appendix J: Ursinus Sustainable Living Guide

Back to Table of Contents

Energy

- Lighting
  - Replace incandescent bulbs with CFLs.
  - Fact: A fluorescent bulb uses 66% less energy and lasts 10 times longer than an incandescent bulb.
  - By replacing one incandescent light bulb with an energy-saving CFL light bulb, you prevent 1,000 pounds of carbon dioxide from being emitted into the atmosphere, and you save $67 dollars in energy costs over the bulb's lifetime. [4]
- Passive solar heating/cooling.
  - Use drapes to help heat/cool residential rooms. Sunlight is our most efficient source of energy. Here's how it works:
    - In cold weather: open drapes and allow the sun to warm your room – even in winter; close drapes at night to keep warmth in.
    - In warm weather: close drapes (and shut your window) to keep hot sun out/cool air in; at night open up the windows and let the cool air in – use a fan to help draw in fresh cool air from outside.
- Fans vs. A/C
  - Bring a window fan to school with you. It will blow a breeze around your room, cooling you off, while allowing you to wear shorts/tank tops (etc) and not be too cold in your room! Fans use MUCH less electricity, and allow you to remember what season your are in.
  - Make sure you head over to the Facilities office to request a window screen if you bring a fan. You don't want a bat to fly into your room! (yes, they do sometimes fly into open windows!!)
- Appliances
  - Limit the number of appliances in your room. Share TVs, microwaves, mini-friges.
  - Use only Energy Star rated appliances.
  - Unplug appliances and cell phone chargers that are not used regularly (and then only plug them in when you need them; some continue to

[4] http://www.housing.berkeley.edu/green-rssp/rssp_green_sustain.html

consume power even when turned off. This burns out the unit faster and heats up the space around it.
    - Plug all your regularly used appliances into a power strip. Turn that off at night so save electricity use called the "phantom load" of electricity use… power that is being used for no reason by appliances that are just waiting to be used.
- Computers
    - Turn off the screen saver function. These do not "save" your screen (that was for several technologies ago). They do use more energy than Sleep mode does.
    - Set your computers energy use settings to low. Check with IT for help with these settings.
    - Turn your computer off when you are not using it.
- Feng Shui – sort of
    - Keep furniture away from the heating and cooling vents to ensure that air is free to flow from the vent. This allows cooled or heated air to reach your room for efficiently.
- Clothing
    - Dress appropriately to the season: wear sweaters in the winter; wear lightweight clothing in the warmer months.
- Laundry
    - Wash your clothes in cold water (in addition to not having to heat the water, it helps your clothes last longer and look better and reduces shrinkage)
    - Line dry your clothes. Invest in a clothes drying rack and hang your clothes in your room.

Food & Drink

- Dining services currently purchases most of it's food within a 75 mile radius of our campus – so rejoice!
- Eat lower on the food chain. Vegetarian meals require much fewer natural resources to produce than meat-based meals.
- Eat organic! Lobby your food service provider to provide more organic food options and to label them as such.
- Avoid drinks delivered to you in plastic. Did you know that it takes over 2 liters of water to produce the bottle that is used for **every** plastic water bottle…and that doesn't include the water in the bottle!

- BYOB – Bring your own Bottle. And make it a stainless steel bottle if you can…you don't want those plastic chemicals leaching into your water!
- Fill your metal water bottle at one of the three water filling stations on campus (there are two in Wismer; one in the Myrin Library). Ask the College to add more of these. If they know you care, they'll be more likely to prioritize it!
- Compost all your food. Dining Services makes this easy to do: composting happens behind the scenes, but you can do your part by putting your paper napkins and food boats on the conveyor belt in Upper Wismer. They can get composted right along with the food! And if you're really motivated, collect your food waste in your room and bring it with you to Wismer to compost (no plastic bags though).
- Vending machines. Our vending machines are on Vending Misers (they turn off when no one is around), but the food out of vending machines is still low quality. Make healthy choices with your money.

Paper

- Reuse paper (turn it over!)
- Don't print multiple drafts of papers – edit on your computer and print only the final.
- Even better: ask your professors if you can turn your paper in electronically.
- Encourage the faculty in your major to adopt paper-free classes (turn in all papers electronically).
- Fact: The average college student discards (to a landfill) 320 pounds of recyclable paper each year. This means that 6.25 students could recycle 1 ton of paper each year with staggering results:
    - One ton of recycled paper will save:
    - 17 Trees
    - 7,000 Gallons of water
    - Enough energy to heat an average home for 6 months
- We have 1,750 students at Ursinus College. If every student at UC recycled their 320 pounds of paper annually, we could save the following amount of resources:
    - (1750/6.25) = 280 tons of paper recycled
        - 280 x 17= 4,760 Trees Saved
        - 280 x 7,000= 1,960,000 Gallons of Water Saved
        - 280 / 2= 140 Homes could be heated for one year

- The entire Ursinus College population (students, faculty, and staff) is 2,200 people. If every student at UC recycled their 320 pounds of paper annually, we could save the following amount of resources:
    - (2,200/6.25) = 352 tons of paper recycled
    - 352 x 17= 5,984 Trees Saved
    - 352 x 7,000= 2,464,000 Gallons of Water Saved
    - 352 / 2= 176 Homes could be heated for one year

Purchasing

- Before you arrive, consider what you'll need to bring. Here's our Green Purchasing Guide for College (this is not an exhaustive list, just some suggestions):
    - Recycled paper, notebooks, etc.
    - Pens that are refillable
    - Pencils that don't have plastic shells…regular wooden pencils are more sustainable!
    - Bike – bring your bike from home. Or join Bikeshare for $10/year and use one of ours!!
    - Fan – to cool your room off
    - Clothes drying rack
    - Environmentally sensitive laundry detergent
    - Organic cotton or bamboo sheets
    - Storage totes that can be used all year (instead of just for transporting to and from school)
    - Reusable bags for shopping (just say "No Thanks!" to plastic bags at **every** checkout you come to)
    - A set of take-out containers for when you go out to dinner and have leftovers.
    - Stainless steel water bottle and a bottle brush to clean it
    - One or two place settings of reusable utensils and plates/bowls to use in your room.
    - Insulated shades or drapes for your window to keep hot sun in or out (depending on time of year)
    - Sweaters, socks, blankets for cold weather.
    - CFL light bulbs
    - Energy-star appliances, if you must bring appliances. Make sure you collaborate with your roomie to make sure you're not duplicating.
    - Power strips – one for things you don't often use; one for things you use all the time.

Transportation

- Join UCBikeshare and ride to local destinations.
- Use public transportation when possible (SEPTA buses run past campus frequently)
- Bike or walk instead of driving.
- Carpool to go to local attractions like the King of Prussia Mall or local movie theaters
- Leave your car at home

Water:

- A five-minute shower uses between 25-50 gallons of water; shorten your shower by one minute and save 5-10 gallons.
    - If every UC student shortened their daily shower by a single minute, we would save 1,960,000 gallons of water over the course of the 32-week academic calendar.
- Turn the water off when you brush your teeth or shave.
- If you live in an apartment, don't run your dishwasher until it is full.
- Throw your food waste in the compost instead of using the trash.
- Watch for leaky faucets, showers, or toilets and enter a work order as soon as you notice one. A leaky faucet can waste 200 gallons of water a month.
- Wash your clothes in a full load of laundry (not a load of just one or two items of clothing).

Get Involved:

- Join a student club that is involved in environmental themes, like UC Environmental Action.
- Apply to work with one of the Office of Sustainability's student groups:
    - UCGreen Sustainability Fellows
    - EcoREPs
- Join UCBikeshare and ride a bike.
- Become an RA and apply to work on the Sustainability Committee
- Encourage the other clubs and activities that you are involved with to embrace sustainability concepts in their actions or activities.
- Encourage your professors to allow electronic submission of papers.

- Participate in the OS's Green Certification Program for Residence Hall Rooms (once in place).
- Write to your local, state and federal elected officials about environmental and/or sustainable topics that are important to you.
- Volunteer at a local environmental organization. Many local organizations have summer internships available.

Appendix K: Ursinus Facilities Equipment

Back to Table of Contents

Updated 1/27/2012

Year Purchased	Make	Model/Description
	Rogers	Leaf Sweeper
	Jacobson	6 Gang Mowers/Frames
1990	Case/IH	Diesel Tractor
		Gang Rollers
	Power	Roller Lawn All AR1 14-62
	Onan	Portable Generator (Trailer)
1985	Yale	Fork Lift #2P28
1985	York	Rake
1985	Wood	Dixie Mower M5-4
1985	ARPS	Model 90 3 PT Hitch Backhoe
	Karcher	Elect. High Press. Sprayer HD820
1985	Turfco	Top Dresser F12B
1987	Case/IH	Diesel Tractor - 385 UT
1987	Case/IH 485	Utility Diesel Tractor\Loadbuc
1987	Jacobson	Turfcat II DW 224
1989	Heinke	Tornado Chipper Grinder-CG650
1991	Mitsubishi	SF27-D 4 WL. Might MIT w/CAP
1992	John Deere	F935
1992	Case/IH	1862 Cub Cadet
	Telescope	
	Coin Changer	
1996	Ditchwitch	2200 Trencher
1996	Hanson	52" Snowblower - T422D
1996	Ariens 12 H.P.	924085 36" Self Prop. Snowthrow
1994	CAB	For Turfcat
1996	Mighty Mac	PS350T 50 Gal. Sprayer
1995	Vicon	PS203 Spreader Seeder
1994	Cub Cadet Diesel	1782 #144-714-100/54" Mower DK
1994	Cub Cadet Diesel	1782 #144-714-100/54" Mower DK
1994	Case IH	2250 Mount O Matic Loader/BKT.
1996	Cub Cadet	44A Used Mower Deck for 1811
1994	Cub Cadet	54" Snow Blades
1994	Cub Cadet	54" Snow Blades
1994	Cub Cadet	190401 Snow Blades
1994	Cub Cadet	190401 Snow Blades
1994	Cub Cadet 8 HP	826T Snowthrower
1994	Cub Cadet 8 HP	826T Snowthrower

1994	Vicon	P50005G2 Salt Spout
1994	Yamaha	Recond. Gia Golf Cart
	Turf Cat	72" Mower Model 66119
	Cub Cadet	42" Snow Blade
1994	Vicon	PS403DM Seed Spreader
	Cub	54" Mower
	Cub	54" Mower
	Cub	54" Mower
	Cub	54" Mower
	Myers	Turfline Sprayer-1 Piston Pump
	Roto-Hoe	Tiller, Model 904
	Delta	Bench Grinder
	Giant	Vac Push Blower (Mag 8)
	Giant	Vac Push Blower (Old 8)
	Giant	Vac Self-P Vac. Model 1780-K
	Jacobsen	Seeder (Self-P) Model 524
	Jacobsen	Areator/Seeder 3 PT. Model 548
	Line Pro	Line Painter
	Shin Daiwa	Back Pack Blower EB-45
		CP-E Pump Sprayer
	Nelson	Rain Train Model 8401
	Muchinex	Dump Trailer
	Parker	Trial Vac
	E-Z Vac	Trail/Vac
	Water Wagon	101 GAL (3 Piston Pump_
	Myers	Truch Plows 7' - (2 of them)
		Snow Chains- 16", 1 Set
	AMT	3" Mud Pump, Model 335
	AMT	2" Trash Pump Model 3930-96R
	Solar	200 Battery/Engine Starter
	Super Pro	800 Exp System
	Little Wonder	Hedge Trimmers
		Tire Machine (Manual)
	Miller	M-180 Elect. Welder
	Ames	Hose Wagon
	Ames	Hose Wagon
	Stihl	Blower BG-72
	Stihl	Blower BG-72
	Stihl	Blower BG-72
	Stihl	Weedeater
	Stihl	Chain Saw
1992	Cub Cadet	20" Push Mower 072R112/072
1992	Cub Cadet	20" Mulching Mower 098R112
	Power	Pole Saw TT21A
	Karcher	Gas Power Washer HD-950
	McCulloch	Pro-Scraper 11-HD
	Black & Decker	5/8" Drill
1994	Turf Cat	SHT-20 M-B Sweeper Attach.
	Sodmaster	Bantam Model J-12

	Scott	Push Spreader
	Fisher	Push Spreader
	KIFCO	Water Reel B-140
	Pallet Jack	BT- Litter
1998	Club Car	Golf Cart, gasoline (Used)
1999	Stihl	F585 Weedwacker
2001	Trynex SP-1075	10.75 CU Salt Spreader with Mount
2001	Ariens	924506 ST1336 Snowblower
2001	Kubota	L3010D 4 Wheel Drive Tractor
2001	Kubota	RC72-29A 72" Mower
2001	Kubota	L2174 61" Two Stage Snowblower
2001	Sims	Cab for 3010 Kubota Tracto
2001	Club Car	Carry All Utility Vehicle
2001	Edge-R-Rite	N2S/P TF8F303
2002	Bobcat	S185 Bobcat Loader
2002	Bobcat	30C Bobcat Auger
2002	Bobcat	84" Bocat Snowblade
2001	Tennant	Model 7200 Disk Brush Bat.Scrub
2002	Turf 2	RG02 Golf Cart
2004	Villager 4	TG04 Gasoline Golf Cart w/canopy
2004	Turf 6	Gasoline Utility Vehicle VGo4 w/cab
2004	Villager 4	Gasoline w/canopy top & windshield
2003	Curtis	8.5' Power V Plow
2003	Stahl	BG85 Blower
2003	Echo	SRM260S Trimmer-Solid
2003	Echo	PB200 Blower-Handheld
2003	Echo	Deep Root Auger
2003	Echo	EDR260 Gas Drill
2004	Scag	STT29KA 29EFI Power Mower
2004	Scag	SMSST72A 72" Tiger Deck
2005	Stihl	Blower Model BG65C
2005	Scag	Sabor Tooth Tiger Rider Model STT31BSD
2005	Scag	72 " Tiger Mower Deck Model SMST72
2005	Scag	Striper Kit Model SGU9269
2005	Carryall 2	2005 Gasoline Pick-up Utilitiy (Golf Cart)
2005	Carryall 2	2006 Electric Golf Cart w canopy & enclos
2005	Genie (Scissor)	Push Around Personnel Lift Model AWP40S-DC
2005	Kubota	RTV900W-H Utility Vehicle
2005	Kubota	Soft Side Cab
2005	Kubota	72" Blade
2005	Trynex	375 Spreader SP-375
2005	Boss	7'6" Super Duty w/RTC Plow
2006	Blower	RMUEBZ8000 Blower
2006	Power Pruner	ECUPPT260 Power Pruner
2006	Line Trimer	ECUSRM261T Line Trimmer
2006	Honda	Rotary Mulching Mower 21" Self Propelled
2006	Vantage	VV-08-06 Model C1000-AT Van Go Cargo Van
2007	Carryall 6	2007 Carryall 6 Electric Flat-bed Utility Vehicle
2007	Carryall 6	2007 Carryall 6 Electric Flat-bed Utility Vehicle

	John Deere	Gator - Small mower for fields donated
2007	Scag	Turf Tiger Model STT61V27CH
2007	Honda	Walk Behind Push Mower Model HRS216K3SDA
2007	Echo	Hedgetrimmer 20 ECUHC150
2007	Curtis	Curtis Soft Sided Cab for 6x4 Gator Heater
2007	Boss	76" Super Duty Boss Plow
2008		Blade Grinder 1 Hp. SIL88-018
2008		GSTT-61V Bagger
2008		Blower
2008		Line Trimmer
2008	Leinbach	Pulverizer 60" LYT51
2008	Fimco	UTL-40-12V 40 Gallon Utility Sprayer, 12 Volt
2009	V-Max	8500 8' long Spreader
2009		BM18522 72" Front Blade
2009		Trimmer
2009	Ariens	Snowblower ST-1028, 10 HP
2010	Ariens	Snowblower ST26DLE Model 926037
2010	Tiger Cat	72" Diesel Deck
2010	Tiger Cat	Tiger Cat Diesel
2010	Echo	Bed Redefiner Flower Bed Edger BRD-280
2011	Ariens	Snowblower ST26DLE
2011	Kubota	Utility Vehicle RTV900W9-H
2011	Subaru	Blower
2011	Super Duty	Plow RT3

Appendix L: Ursinus Main Buildings List

Back to Table of Contents

Campus buildings, by year, size, average kWh/sq.foot, facilities, and programs served.

Building Name	Year Built	Square Footage	Building Facilities	Programs (if applicable)
Bakes Athletics Center	2001	126,329	The recently renovated facility contains a state-of-the-art fitness center and weight room, a 200-meter indoor track, indoor tennis courts, dance studio, three full-sized basketball courts, spacious locker rooms and team rooms, wrestling room, classrooms, regulation collegiate-sized swimming pool, racquetball court, gymnastics space and the Helferrich gym	Houses the academic department of Exercise and Sport Science and the Department of Athletics and is home to the colleges intramural sports teams
Berman Museum	1921, 2010 (ad'n)	15,447	An art museum and multipurpose space that is used for seminars, lectures and films; a non-circulating art library; three separate exhibition galleries; and complete storage and work areas. Henry and June Pfeifer wing was added in the spring of 2010 and includes a lecture hall, a paper works room, and an outdoor sculpture terrace. Building was formerly a library.	Fine arts museum with exhibition and research spaces. Departments of Art and Art History use this space for classes and exhibits. The space is also used for special events.
Bomberger Hall	1891 (2009r)	20,746	Classrooms, offices, meditation chapel, large auditorium, Heefner Memorial Organ, the second largest organ in Pennsylvania.	Departments of Economics and Business Administration, Anthropology and

				Sociology, Career Services, Campus Chaplain, the Education Department, and Music.
Corson Hall	1969	23,148	Administrative offices	Admission, Advancement, Business Office, Human Resources, President's Office, and Student Financial Services
Kaleidoscope Theater	2005	60,271	Two theaters (black box and a 350-seat proscenium arch theater), dance studios, prop & costume shops, set construction, atrium, green rooms, dressing rooms, classrooms, offices, teaching support space and a gallery and art work space	Houses the Theater and Dance Department. Is used by art students for work and exhibit space. Is also used for special events and is rented to outside groups for events.
Myrin Library	1970	41,640	Book storage (420,000 volumes), lending library,study space for up to 500 people, coffee shop, computing center, offices.	In addition to the library's holdings, Myrin houses the College's Academic Computing Center, the Pennsylvania Folklife Archives, the Ursinusiana Collection of College-Related Artifacts, and

				the offices of the Academic Support, College Communications and Information Technology
F.W. Olin Hall	1990	31,937	Contains a 400-seat lecture hall, a 63-seat tiered classroom, a 42-seat tiered classroom, the college's writing center, eight traditional classrooms and four seminar rooms	Departments of English, History, Modern Languages, Classics, and Philosophy and Religion
Pfahler Hall	1932, 1998r	72,322	Science labs, classrooms, offices, dark room, auditorium, meeting rooms, student work spaces,	Chemistry, Computer Science, ENV, Geology, Mathematics, Physics
Ritter Center	1927, 1980	25,759	An art studio, a television studio, classrooms, auxiliary rooms, offices,	Houses the Media and Communication Studies and Art Departments, and the College's Copy Center.
Thomas Hall	1970, 1991r	34,005	Science labs, classrooms, offices	Biology and Psychology departments
Unity House	1928	2,030	Offices, meeting space, classroom	Multicultural Services, Crigler Institute
Wellness Center	1955	2,652	This building is a converted home and includes offices and examination rooms.	Student Health
Wismer Center	1965, 2009-2011r	59,989	dining facilities, social lounges, an office complex for student activities, retail space, a convenience store, an entertainment room and a	Dining Hall, Zack's, Bookstore, Dean of Student's Office, Residence Life

			multipurpose lounge	Offices, UCARE, Sodexo offices, Student Leadership Offices
Residential buildings - 43	Var.		Consists of approximately 30 houses in a variety of sizes, the majority of which are located on Main Street. All include laundry rooms, common areas, and kitchens	See Appendix M for a list that includes these buildings as well as their square footage and number of residents.

Appendix M: Ursinus Building List, by Type

Back to Table of Contents

Campus Buildings, by type.

Type	St #	St Name	Building Name	Usable Sq. Ft.	Total Sq. Ft.	Construction Date	# of Residents
Academic - Art Studios	511	Main Campus Dr	Ritter Hall & Art Studio	25,759	25,759	1927	
Academic - Classrooms	508	Main Campus Dr	Bomberger Hall	34,042	40,642	1891	
Academic - Classrooms	506	Main Campus Dr	Olin Hall	31,937	45,467	1990	
Academic - Science	610	Main Campus Dr	Pfahler Hall	72,322	72,322	1922	
Academic - Science	700	Main Campus Dr	Thomas Hall	34,005	48,626	1970	
Academic - Theater	612	Main Campus Dr	Kaleidoscope Theater	51,622	60,271	2005	
Administrative Offices	502	Main Campus Dr	Corson Hall	23,148	23,148	1969	
Art Museum	504	Main Campus Dr	Berman Art Museum	18,447	26,833	1921	
Athletics Center	701	Main Campus Dr	Bakes Center/Helferich Gym/Field House	126,329	184,934	1972, 2001	
Dining Hall/Student Center	509	Main Campus Dr	Wismer Center	55,003	59,989	1965	
Library	600	Main Campus Dr	Myrin Library	41,556	55,408	1970	
Wellness Center	789	Main St	Wellness Center (Wagner)	2,652	3,890	1955	
DORM	201-203	E 9TH Ave	201-203 E 9th	6,090	6,090	Not Known	10
DORM	732	Main St	732 Main	5,698	8,688	1925	12
DORM	777	Main St	777 Main	2,128	3,128	1955	7

Type	St #	St Name	Building Name	Usable Sq. Ft.	Total Sq. Ft.	Construction Date	# of Residents
DORM	942	Main St	942 Main	2,744	3,883	1942	9
DORM	944	Main St	944 Main	4,200	4,398	1939	12
DORM	476	Main St	Barbershop - Residence Hall	2,410	4,241	1934	5
DORM	503-507	Main Campus Dr	Beardwood, Paisley, & Stauffer Halls (BPS)	57,778	57,778	1957	163
DORM	604-608	Main Campus Dr	Broadbeck, Wilkinson & Curtis Halls (BWC)	31,761	42,716	1927, 1966 (Wilkinson Hall)	108
DORM	732	Main St	Carriage House	1,628	2,146	1925	3
DORM	409	Main St	Clamer Hall	4,499	7,285	1921	15
DORM	811	Main St	Cloake House	2,584	3,364	Not Known	6
DORM	500	Main St	Commonwealth	6,096	8,762	1920	14
DORM	612	Main St	Duryea Hall	4,110	6,066	1900	9
DORM	785	Main St	Elliot House	3,338	5,298	1958	7
DORM	554	Main St	Fetterolf House	5,033	7,076	1792	9
DORM	33	6TH Ave	Hillel House (Yost)	2,322	3,731	1913	4
DORM	568	Main St	Hobson Hall	3,411	5,793	1898	12
DORM	801	Main St	Isenberg House	4,422	6,057	1895	11
DORM	513	Main St	Keigwin Hall - UC	2,694	4,435	1935	6
DORM	702	Main St	Lynnewood Hall	4,056	6,018	1935	9
DORM	512	Main St	Maples Hall	6,498	6,543	1930	10
DORM	23	6th Ave	Musser Hall	12,036	12,274	Not Known	38
Dorm	514	Main Campus Dr	New Hall	37,677	52,144	2007	127
DORM	640	Main St	Olevian Hall	4,525	6,652	1932	9
DORM	701	Main St	Omwake Hall	3,846	5,515	1925	9
DORM	708	Main Campus Dr	Reimert - Complex A	5,040	7,560	1967	129
DORM	708	Main Campus Dr	Reimert - Complex B	10,890	10,890	1967	
DORM	708	Main Campus Dr	Reimert - Complex C	18,252	18,252	1967	

Type	St #	St Name	Building Name	Usable Sq. Ft .	Total Sq. Ft.	Construction Date	# of Residents
DORM	708	Main Campus Dr	Reimert - Complex D	10,890	10,890	1967	
DORM	30-32	6TH Ave	Residence Hall	3,842	5,594	1920	10
DORM	624	Main St	Residence Hall	2,550	3,720	1910	7
DORM	510	Main Campus Dr	Richter/North Hall	46,388	46,388	2002	109
DORM	646	Main St	Schaff Hall	3,711	5,299	1938	7
DORM	600	Main St	Schreiner Hall	6,432	9,303	1892	16
DORM	55	E 5th Ave	Sprankle Hall	4,217	4,217	1925	13
DORM	26	6th Ave	Sturgis Hall	2,088	3,132	1935	6
DORM	724	Main St	Todd Hall	4,284	6,306	1932	10
DORM	716	Main St	Wicks	5,856	8,332	1936	17
DORM	620	Main St	Zwingli Hall	4,056	6,060	1935	13
DORM	424-426	Main St	424/426 Main	3,055	5,227	1934	10
DORM	444	Main St	444 Main	1,973	3,273	1927	3
DORM & Multi-cultural Affairs	500	Main Campus Dr	Unity House	2,030	3,594	1928	4
Private Residence	65	6TH Ave	65 6th	2,670	4,130	1955	
Private Residence	99	E 9TH Ave	99 9th - President's	4,210	5,889	1943	
Private Residence	100	E 9TH Ave	100 9th	1,380	2,779	1957	
Private Residence	155	E 9TH Ave	155 9th	3,519	3,519	1955	
Private Residence	175	E 9TH Ave	175 9th	1,584	2,996	1962	
Private Residence	275	E 9TH Ave	275 9th	2,260	3,570	1955	
Private Residence	542	Main St	Super House	3,831	5,704	1892	
RENTAL	319	E 9TH Ave	319 9th	1,924	1,924	Not Known	
RENTAL	324	E 9TH Ave	Farmhouse	3,266	3,442	1900	
RENTAL	325	E 9TH Ave	325 9th	1,754	3,508	Not Known	
Facilities	400	Main Campus Dr	Facilities, incl. shop	9,684	9,684	1957	
Facilities	401	Main Campus Dr	Heat Plant	4,453	4,453	1962	
Facilities	408	Main Campus Dr	Chiller Plant	2,500	2,500	~2003	

Type	St #	St Name	Building Name	Usable Sq. Ft.	Total Sq. Ft.	Construction Date	# of Residents
Facilities - Storage/ Private	99	E 9TH Ave	99 9th Garage	0	441	1943	
Facilities - Storage/ Private	99	E 9TH Ave	99 9th Pool House	0	333	1943	
Facilities - Storage	324	E 9th Ave	Barn	0	2041	1900	
Facilities - Storage	325	E 9TH Ave	Garage	0	440		
Facilities - Storage	324	E 9TH Ave	Storage	0	546		
Facilities - Storage	402	Main Campus Dr	Equipment Barn	4,838	4,838	1961	
Facilities - Storage	406	Main Campus Dr	Pole Barn	5,000	5,000	1989	
Facilities - Storage		Main Campus Dr	DLH Garage	0	525		
Facilities - Storage	444	Main St	444 Main Shed	0	200	1927	3
Facilities - Storage	777	Main St	777 Main Garage	0	391	1955	7
Facilities - Storage	785	Main St	Elliot House Garage	0	525	1958	
Facilities - Storage	942	Main St	942 Main Garage	0	418	1942	9
Facilities - Storage	424-426	Main St	424/426 Garage	0	1710	1934	10
Facilities - Storage/ Athletics	701	Main Campus Dr	Utility Storage - Gym	0	759	1972	

Appendix N: Ursinus Fleet Vehicles, Owned and Leased

Back to Table of Contents

Ursinus College Fleet Vehicles – Owned

Year	Make	Model	Dept/Use	Use
1988	EZ	Trailer	DLH	
1991	Dodge	Van	Facilities	
1995	Ford	Super Club Wagon	Facilities	Dining Services
1996	Jeep	Cherokee	Campus Safety	EMS
1999	Ford	F350 Truck	Facilities	
1999	Ford	Altec Lift Bucket Truck	Facilities	
2000	Ford	E-350 SD Cutaway	Chemistry	Science in Motion
2003	GMC	Sierra 1500	Facilities	
2003	Chevrolet	Silverado Pickup	Facilities	
2004	Chevrolet	Express Cargo Van	Chemistry	
2004	Long Chih	LCI-830T Trailer	Facilities	
2005	GMC	Dump Truck	Facilities	
2006	Vantage	VanGO	Facilities	Mail Services
2011	Chevrolet	Silverado 1500	Facilities	

Ursinus College Fleet Vehicles – Leased

Lease Expiry	Year	Make	Model	Dept/Use	Use
2012-03	2009	Toyota	Avalon	President	Personal
2012-08	2010	Toyota	Sienna Van	Facilities	Van #5
2012-09	2010	Toyota	Camry Hybrid	Admissions	
2013-01	2010	Toyota	Sienna Van	Facilities	Van #2
2013-01	2010	Toyota	Sienna Van	Facilities	Van #3
2013-03	2010	Toyota	Camry Hybrid	Admissions	
2013-08	2010	Toyota	RAV 4	Campus Safety	
2014-08	2011	Toyota	Sienna Van	Facilities	Van #4
2014-09	2011	Toyota	Sienna Van (LE)	Facilities	Van #1

Appendix O: Eco-Driving Recommendations

Back to Table of Contents

This is not meant to be an exhaustive list, but a set of guidelines. The list below is from the Automobile Association (a British equivalent of AAA) below.[5] If you have questions or ideas to add to this list, please contact the Office of Sustainability at sustainability@ursinus.edu.

- **"Easy does it:** drive smoothly, accelerate gently and read the road ahead to avoid unnecessary braking.
- **Decelerate smoothly:** when you have to slow down or stop, decelerate smoothly by releasing the accelerator, leaving the car in gear (or put into neutral if driving a stick shift vehicle).
- **Rolling**: in traffic, if you can keep the car moving all the time, so much the better; stopping then starting again uses more fuel than rolling. You should always obey stop signs.
- **Cut down on the A/C:** air-conditioning increases fuel consumption at low speeds, but at higher speeds the effects are less noticeable. So if it's a hot day open the windows around town and save the air conditioning for high speed driving. Don't leave air-conditioning on all the time but aim to run it at least once a week throughout the year to maintain the system in good condition.
- **Turn it off:** electrical loads increase fuel consumption, so turn off your heated rear windscreen, demister blowers and headlights, when you don't need them
- **Stick to speed limits:** the faster you go the greater the fuel consumption and pollution. Driving at 70mph uses up to 9% more fuel than at 60mph and up to 15% more than at 50mph. Cruising at 80mph can use up to 25% more fuel than at 70mph.
- **Don't be idle:** if you do get caught in a queue, avoid wasting fuel – turn the engine off if it looks like you could be waiting for more than three minutes.
- **Don't get lost:** plan unfamiliar journeys to reduce the risk of getting lost and check the traffic news before you leave
- **Don't top off the tank:** Don't "top off" your gas tank. Stop at the click. Topping off your tank allows emissions to escape, sometimes spilling gas.
- **Fuel when cool:** Fuel vehicle when it is cool, not in the heat of the day.
- **Small is good:** Use the smallest vehicle possible for the task. In other words, don't use a van if you really only need an economy car."

[5] See the AA's Eco-Driving advice on their website: http://www.theaa.com/motoring_advice/fuels-and-environment/drive-smart.html

Appendix P: Ursinus Science Labs & Equipment

Back to Table of Contents

Ursinus College Science Labs, Equipment and Fume Hoods

Pfahler Hall Rooms:	Types of Labs	Building Square Footage 72,322	Lab Square Footage	Energy Intensive Equip.	VAV Fume Hoods	CAV Fume Hoods
Chemistry:						
201	Biochemistry			X	4	-
206	Prep Room		410	X	-	1
215	Inorganic Chemistry Lab		1,620	X	7	-
301	Advanced Chemistry Lab		1,050	X	8	-
302	Physical Chemistry Lab		1,040	X	3	-
304	Research Lab			X	-	2
306	Research Lab			X	-	2
307	Research Lab			X	-	2
309	Research Lab			X	-	2
310	Research Lab			X	-	2
312	Research Lab			X	-	2
314	General Chemistry Lab		1,445	X	9	-
314b	Chemistry Stockroom		686	X	-	1
315	Organic Chemistry Lab		2,133	X	29	-
316	General Instrumentation Lab		973		-	-
Physics:						
013	Bio A&P shared with Physics		1,675	X	6	0
013A	Advanced Physics Lab					

013B	Electronics Lab		410			
108	Intro Physics Lab		1,505			
108C	Research Lab			X		
4th Floor	Marsteller Observatory					
Thomas Hall Rooms:	Types of Labs	Square Footage 72,322	Lab Square Footage	Energy Intensive Equip.	VAV Fume Hoods	CAV Fume Hoods
Biology:						
126	Multi-use			X	-	1
128	Intro Biology Lab			X	-	1
206 (wet)	Diatom Population Biology				-	-
220	Physiology/Neurology	34,005	850	X	-	1
007	Ecology				-	-
008	Neurobiology		850	X	-	1
107	Microbiology			X	-	1
110 & Greenhouse	Entomology					
112 (renov.)	Developmental Biology & Neurobiology			X	1	-
118	Biochemistry		1,770	X	-	1
120	Biochemistry		315	2 Bio-Safety Hoods	-	-
121	Developmental Biology & Neurobiology			X	-	-
202	Various			X	-	1
210 (renov.)				X	1	-
217	Cardiac Function			X	-	1

Appendix Q: Pfahler Hall Science Labs & Equipment

Back to Table of Contents

Science labs in Pfahler Hall, descriptions, square footage, and fume hoods.

	Type	Additional Rooms, Special Equipment, Special Features	Net Square Feet (NSF)	VAV Fume Hoods	CAV Fume Hood
PFAHLER					
Chemistry					
Teaching Labs					
Room	Type	Additional Rooms, Special Equipment, Special Features	9,357		
201	Biochemistry			4	-
206	Prep Room	NMR room adjacent (410 sf)	410	-	1
215	Inorganic Chemistry Lab	Unoccupied Setting	1,620	7	-
301	Advanced Chemistry Lab	Equipment: Flame Atomic Absorption (AA) Spectrometer; High Performance Liquid Chromatography (HPLC) attached to Mass Spectrometer	1,050	8	-
302	Physical Chemistry Lab		1,040	3	-
304	Research Lab	Equipment: Fourier-Transform Infrared (FT/IR) Spectrometer		-	2
306	Research Lab	Equipment: High Performance Liquid Chromatograph (HPLC)		-	2
307	Research Lab			-	2
309	Research Lab			-	2
310	Research Lab	Web research Mossbauer Spectrometer		-	2
312	Research Lab			-	2
314	General Chemistry Lab	Unoccupied Setting	1,445	9	-
314b	Chemistry Stockroom	Lab prep & GC - balance room (216sf)	686	-	1
315	Organic Chemistry Lab	Has unoccupied Setting; instrument room (130 sf); balance room (133 sf) - square footage added in; Equipment: HP GCD G1800A (GC/MS)	2,133	29	-
316	General Instrumentation Lab	FT/IR Spectrometer; Thermometric TAM Isothermal Calorimeter; Gold HPLC; Capillary Electrophoresis; HP GC/MS; HP Gas Chromatograph connected to Mass Spectrometer (MS); Electrochemical Analyzer; Flourescence Spectrometer; 2S UV-Visible Spectrometer; 3S UV-Visible Spectrometer; UV-Visible Molecular Absorption Spectrometer; UV-NIR Molecular Absorption Spectrometer	973	-	-

Chemistry Subtotals	14 labs; 1 stockroom		60	14

Math and Computer Science

Teaching Labs

Room	Type	Additional Rooms, Special Equipment, Special Features	690
	Calculator Room		690

Research Labs

Room	Type	Additional Rooms, Special Equipment, Special Features	415
	Hardware Lab		415

Math and Computer Science	1 lab

Physics and Astronomy

Teaching Labs

Room	Type	Additional Rooms, Special Equipment, Special Features	1,915
013	Bio A&P shared with Physics	HVAC air exchange	1,675
013A	Advanced Physics Lab		
013B	Electronics Lab		410
108	Intro Physics Lab	Storage area	1,505
4th Floor	Marsteller Observatory		

Research Labs

Room	Type	Additional Rooms, Special Equipment, Special Features	190
108C	Research Lab	UC Parallel Computing Cluster & HVAC to cool them	190

Physics and Astronomy	5 labs and 1 observatory

Appendix R: Thomas Hall Science Labs & Equipment

Back to Table of Contents

				Net Square Feet (NSF)	VAV Fume Hoods	CAV Fume Hood	Other Hoods
THOMAS							
Biology					VAV hoods	CAV Hoods	
Teaching Labs (all wetlabs)							
Room	Type	Specifics	Additional Rooms, Special Equipment, Special Features	850			
126	Multi-use	genetics, developmental biology; cell biology	refrigerator/freezer; 126A - prep room: autoclave; 2 refrigerator/freezers		-	1	
128	Intro Biology Lab	ecology; cell biology	heated fish tanks		-	1	
206 (wet)	Diatom Population Biology	Teaching and Research			-	-	
220	Physiology/ Neurology			850	-	1	
Research Labs (all wetlabs)							
Room	Type	Specifics	Additional Rooms, Special Equipment, Special Features	2,935			
007	Ecology	Fish	n/a		-	-	
008	Neurobiology	Prenatal Alcohol Exposure (Animal lab - mice)	refrigerator/freezer	850	-	1	
107	Microbiology	Microbiology	Glove Box, autoclave		-	1	
110 & Greenhouse	Entymology	Conservation & ecology of beneficial insects	Greenhouse & 110 (lab)				
112 (renov.)	Developmental Biology & Neurobiology	C. Elegans, (microscopy)	Equipment Room (rm 114): -80oC freezer; 3 incubators; regular freezer; door to		1	-	

			Greenhouse				
118	Biochemistry	Biochemistry & Cell bio	Tissue culture room; cold room (195 SF), -80oC freezer; -20oC freezer; ice maker (all day); centrefuge (unused)	1,770	-	1	
120	Biochemistry	Cold Room? (150 sf) Prep lab? (165 sf)		315	-	-	2 HEPA Biosafety Cabinets
121	Developmental Biology & Neurobiology	C. Elegans, wetlab	Incubator (2)		-	-	
202	Various	Chemo Reception Invertibrates (salamanders & mice)/ Ecology of Suburban mice/ Genetics of fish populations	Animal room; storage; pumps; -80oC; -20oC freezer?; frige/freezers (2); confocal microscope (lasers); facs machine (cell sorting)		-	1	
207					-	1	
210 (renov.)		Prion Proteins in Yeast	Equipment Room: -80oC		1	-	
217	Cardiac Function	Cardiac Function (Animal lab) - mice			-	1	
Biology Subtotal					2	9	2

				Net Square Feet (NSF)	VAV Fume Hoods	CAV Fume Hood	Other Hoods
THOMAS							
Psychology					VAV hoods	CAV Hoods	
Teaching Labs							
Room	Type	Specifics	Additional Rooms, Special Equipment, Special Features	440			
	Quiet CPU Room		multiple computers	190			
	Demonstration CPU Room		multiple computers	250			
Research Labs							
Room	Type	Specifics	Additional Rooms, Special Equipment, Special Features	720			
	Sleep lab			260			
	EEG Lab	two rooms		160			
	Neuro Lab			100			
	Social Process Lab			200			
Psychology Subtotal				1,160			

Appendix S: Sodexo Sustainability Student Promotion Coordinator Job Description

Back to Table of Contents

Sustainability Student Promotion Coordinator

The Sustainability Student Promotion Coordinator (SSPC) supports the on-site campus dining team in the process of developing and implementing sustainable dining promotions, using their input at every stage of the process to inform and inspire creative ideas, and guide the implementation of the resulting promotion campaigns.

In this role, the SSPC interacts with internal team members; district marketing specialist; student promotion coordinator; Pepsi intern; creative agencies (if applicable); media and public relations personnel; client stakeholders, and customers. This person will have a high level of customer contact and must be comfortable assuming a leadership position. The position reports directly to an assigned Dining Manager or District Marketing Specialist.

Qualifications:

- Good Academic Standing – Environmental Sciences Major, Art Major, Media and Communications Major, Theatre Major.
- Demonstrate Strong Presentation, Teamwork, and Leadership Skills.
- Excellent Verbal and Written Communication Skills.
- Dynamic Leadership Abilities.
- Proficient in computer skills, Microsoft Office and Intermediate level of Adobe® Photoshop. Graphic Design and Web Site Design skills are preferred.

Projects: Below is a brief summary of projects for the Sustainability Student Promotions Coordinator.

- Increase awareness of sustainability practices within dining services. Create a clear communication to students, faculty, staff, and the entire College community by the following methods:
    - create advertising plans.
    - develop creative sustainable advertising practices (parents plaza bed sheets, side walk chalk, viral marketing, etc.).
    - messaging, Face book updates, D-txt text messaging.
    - media, web updates, viral marketing.
    - event planning and execution.
- Develop detailed action plans and creative strategies for assigned dining promotions and special events.
- Obtain approval from their Supervisor on all actions including of promotion partners, media coverage, and event hosting/coordination.
- Coordinate with Supervisor to ensure staff is up-to-date on current sustainable facts and activities.
- Positively and professionally represents dining services at any student/campus events they

attend.
- Inform their Supervisor immediately of any potential promotion problems or concerns (budget over-expenditures, partner sponsorship issues, media coverage, etc.)
- Review all media regarding sustainable dining events and awareness to ensure accuracy, content, and plan compliance.

Hours and Compensation:

An average of 10-15 hours per week is expected. Hours are flexible based on academic calendar. Compensation can be hourly or stipend based on experience and skills.
$8.50 to $10.00 per hour or a stipend per semester $500.00 - $900.00 per semester

Tracking: Tactic Sheets and Portfolio:
A digital or printed portfolio is expected at the end of the semester. The portfolio will be a summary of promotion activities, events, tracking results, photos, customer comments, projects from the semester and future recommendations.

Appendix T: Sample AASHE STARS Checklist for Dining Services

Back to Table of Contents

Ursinus College Dining Services
2010-2011 "Green Report Card"
Annual Food Budget

1. Total annual food budget (2010-2011).

2. Please indicate the dollar amount spent in the 2010-2011 academic year on products within each category below.

FOOD PRODUCT	DOLLAR AMOUNT (2010-2011)
Fruits and vegetables	
Dairy	
Eggs	
Meat and poultry	
Seafood	
Coffee	
Locally Grown and Produced Food	

3. Please check the items that you purchase from local growers or processors. We define "local" food as food that has been grown, raised, produced, or processed within 150 miles of campus.

[ ] Vegetables
[ ] Fruits
[ ] Milk
[ ] Processed dairy products (ice cream, cheese, yogurt, butter)
[ ] Grains and beans
[ ] Meat
[ ] Poultry
[ ] Eggs
[ ] Seafood
[ ] Baked goods
[ ] Granola/cereal
[ ] Maple syrup, honey, etc.
[ ] Beverages
[ ] Sauces, spreads, hummus, salad dressing, etc.
[ ] Other. Please describe:

4. What dollar amount of the 2010-2011 food budget was spent on purchasing food that was grown or raised locally?

5. From how many local farms or growers do you purchase food (excluding on-campus farms/gardens)?

Number from which you purchase directly:
Number from which you purchase through a distributor:

Please specify name and location of distributor:

6. How much did you spend in the 2010-2011 academic year on purchasing food that was processed locally?

7. From how many local processors do you purchase (excluding on-campus farms/gardens)?

Number from which you purchase directly:
Number from which you purchase through a distributor:
Please specify name and location of distributor:

8. Do you source any food from an on-campus farm or garden?

If yes, please provide details below.
Source:
Items procured:
Dollar amount spent:
Organic and Sustainably Produced Food
9. Please check items that you purchase that are organically grown or produced. "Organically grown or produced" can be defined accord to USDA or Quality Assurance International standards.

[ ] Vegetables
[ ] Fruits
[ ] Milk
[ ] Processed dairy products (ice cream, cheese, yogurt, butter)
[ ] Grains and beans
[ ] Meat
[ ] Poultry
[ ] Eggs
[ ] Seafood
[ ] Baked goods
[ ] Granola/cereal
[ ] Maple syrup, honey, etc.
[ ] Beverages
[ ] Sauces, spreads, hummus, salad dressing, etc.
[ ] Other. Please describe:

10. How much did you spend on organically grown or produced food in the 2010-2011 academic year?

Please note: For questions 11-14, indicate the percentage based on dollar amount spend in the 2010-2011 academic year.
11. Do you purchase cage-free/free-range eggs and/or confinement-free animal products?

If yes, please provide details below.

	PRODUCT NAME	PERCENTAGE PURCHASED
Cage-free/free-range eggs:		
Confinement-free product 1:		
Confinement-free product 2:		
Confinement-free product 3:		
Confinement-free product 4:		

12. Do you purchase any vegetarian-fed animal products?

If yes, please provide details below.

	PRODUCT NAME	PERCENTAGE PURCHASED
Vegetarian-fed product 1:		
Vegetarian-fed product 2:		
Vegetarian-fed product 3:		
Vegetarian-fed product 4:		
Vegetarian-fed product 5:		

13. Do you purchase any hormone- and antibiotic-free meat and/or dairy products?

If yes, please provide details below.

	PRODUCT NAME	PERCENTAGE PURCHASED
Hormone-free product 1:		
Hormone-free product 2:		
Hormone-free product 3:		
Hormone-free product 4:		
Hormone-free product 5:		

14. Do you purchase seafood that meets Monterey Bay Aquarium Seafood Watch guidelines and/or Marine Stewardship Council Blue Ecolabel standards?

If yes, please provide details below.

	PRODUCT NAME	PERCENTAGE PURCHASED
Seafood product 1:		
Seafood product 2:		
Seafood product 3:		
Seafood product 4:		
Seafood product 5:		

15. Do you offer specifically labeled vegan entrees on a regularly scheduled basis?

If yes, please provide the average number of labeled vegan meals offered each week.

16. Please list and give the dollar values for any other sustainably produced food items you purchase that are not included above:

PRODUCT NAME	DOLLAR AMOUNT
Other food item 1:	
Other food item 2:	
Other food item 3:	
Other food item 4:	
Other food item 5:	

Fair Trade Products

17. Do you purchase Fair Trade Certified coffee?

18. Do you purchase other Fair Trade Certified food products?

If yes, check all that apply:

[ ] Chocolate

[ ] Tea
[ ] Bananas
[ ] Other. Please describe:

Dishware and Eco-Friendly Incentives

19. If you offer disposable dishware at your dining services locations, please indicate materials used.

Check all that apply.
[ ] Plastic
[ ] Polystyrene (Styrofoam)
[ ] Post-consumer recycled content
[ ] Biodegradable/compostable
[ ] Other. Please describe:

20. Do your dining facilities offer discounts or cash incentives to individuals who use reusable dishware, bring a bag, or bring reusable containers?

If yes, please indicate items for which incentives are offered, and describe the incentives below.

DESCRIPTION

[ ] Reusable bag
[ ] Reusable dishware
[ ] Reusable mug
[ ] Reusable to-go container
[ ] Other. Please describe:

Food Composting and Waste Diversion

21. Do your dining facilities compost pre-consumer food scraps?

If yes, please provide details below.

Percentage of meals for which pre-consumer food scraps are composted:
Additional information:

22. Do your dining facilities compost post-consumer food scraps?

If yes, please provide details below.

Percentage of meals for which post-consumer composting is available:
Additional information:

23. Do your dining facilities donate excess food to a food bank, soup kitchen, or shelter?

If yes, please describe below.

24. Do your dining facilities have a trayless dining program?

If yes, please describe below.

Percentage of meals served on campus that are trayless:

Year trayless program was started:
Additional comments:

25. Please tell us about any other steps your dining facilities have taken to reduce waste.

Mark all that apply and describe.

[ ] Food waste audit or study.
[ ] Recycling used cooking oil for biodiesel production.
[ ] Removal of bottled water from all facilities operated by dining services.
[ ] Other. Please describe:

Recycling of Traditional Materials

26. Please indicate which traditional materials your dining facilities recycle. Check all that apply.
Please discuss only the materials you recycle specifically in the dining facilities. Recycling of used cooking oil for biodiesel production should be described in Question 25.

[ ] None
[ ] Aluminum
[ ] Cardboard
[ ] Glass
[ ] Paper
[ ] Plastics (all)
[ ] Plastics (some)
[ ] Other. Please list:

27. Are recycling receptacles located throughout dining locations?

28. What is the dining services' current waste-diversion rate (the percentage of recyclable/compostable waste diverted from traditional disposal)?
Please provide information specifically about your dining services' operation. If information is unavailable, leave blank. Do not use the overall rate for the campus-wide

Appendix U: Ursinus Athletic Facilities List

Back to Table of Contents

Athletics facilities, by type.

Indoor facilities	**Floy Lewis Bakes Athletics Center** • Fitness Center and Weight Room • A regulation collegiate-sized pool • Dance studio • Athletic training room • Racquetball court • 3 classrooms and an exercise lab • Locker rooms • Academic/Administrative/Coaches offices
	Helfferich Gymnasium • Basketball court • Volleyball court • Wrestling room • Gymnastics gym
	Field House • 200-meter track • Three indoor tennis courts • Three full-sized basketball courts • Two batting cages
Outdoor facilities	**Baseball Field** • Baseball diamond is unlighted – used only for day games
	Eleanor Frost Snell Alumnae Field • Artificial turf field hockey field (including lighting and an irrigation system)
	Patterson Field • This is our newly renovated artificial turf football and soccer field. This field was completed during the summer of 2011. • The field is surrounded by a newly resurfaced track. • Lights are installed at this facility and are turned on all night for campus and community runners and walkers.
	Outdoor Field Events • Our field events take place on one of our lower fields, below Patterson. We have a full complement of field

	event venues: pole vault, high jump, long jump, triple jump, discus, shot put & hammer throw
	Eleanor Frost Snell Softball Field • This is an unlit field used for day games.
	Hunsburger Woods Field • This field is located across 9th Ave. from the main campus. • Club Sports practice and potentially competition space
	Practice Fields • Wilkes Field • Lower Football Field (with lighting) • Facilities Field (the old field hockey field)
	Tennis Courts • Ursinus has eight outdoor tennis courts. • Two of the courts have lighting for night practice and/or games

Appendix V: Ursinus Green and Bear It Team Goals

Back to Table of Contents

Green and Bear It Team Goals

Area	Activity	Details
Outreach & Collaboration	Team Development	• Develop draft guidelines for a Green Team certification program. ○ Could include: purchasing carbon offsets for team travel, recycled content uniforms, "green" community service, commitment to environmentally friendly laundry detergents, net zero games, net zero seasons, etc. • Draft ideas for how what incentives might work for team competitions that relate to sustainability. • Create ideas for awards that Athletics Department could give out to seniors for "Green" service to the program.
	Game Day	Green Team members will work together to ensure that sustainability practices are in place for games. This will include: ▪ Placement of appropriate number of recycling containers at game events. ▪ Messaging during games about recycling, the Green & Bear It program, Sustainable Game Days, etc. ▪ Information Booth. Set up information tables at games to inform fans of sustainable programming in Athletics or on their particular team. ▪ Development and publication of an Athletics brochure (scan-able rather than printed).
	Outreach	Work with local school district to collaborate on recycling programs.
Education:	Resource Development	Brochure • Develop brochures about green athletics programming aimed at prospective students, alumni, other audiences. Signage • Create and post signs/posters reminding users to turn off lights, take shorter showers, use stairs, etc. (may include calories burned, energy savings, resource savings, etc). Resource list Create a resource list for the campus community about sustainability in Athletics at UC. This list should have sections on purchasing, recycling, operations, education, outreach and transportation. Each section should provide

		guidance on who to contact, what options are available, and where to find more information. For example: • Recycle used tennis balls (www.rebounces.com); • Recycle used athletic shoes (www.nikereuseashoe.com); • Donate used sporting equipment to www.goodwill.org or Play It Again Sports; • Old sporting trophies can be recycled at www.greentrophyproject.org; and • Yoga mats can be recycled at www.recycleyourmat.org.
	Fan Education	▪ Develop a program within the Athletics Department that will educate and encourage UC Bears fans to participate in energy reduction, waste reduction, and sustainability programming. ▪ Strategize what the message to fans should be, how to communicate the message, how to encourage participation.
	In house education about Sustainability programs	Educate Athletics administrators, coaches and staff on the following aspects of sustainability in athletics ○ Program overview ▪ It will be good if all Athletics staff members know about the Green Athletics program so they can talk to others about it. ▪ Having a brochure will help (online or printed). ○ Student involvement ▪ How student athletes are engaging in the sustainable athletics program. ▪ Benefits of the program to the athletes. ○ Purchasing guidelines for Athletics ▪ Recycled content paper. ▪ "Green" alternatives for athletics supplies/equipment: balls, pads, shoes, uniforms, hats, etc. ○ Promoting your green strategy with sponsors and advertisers
Mission Development		Draft a green mission statement for UC Athletics' Green & Bear It program, e.g., "In considering [Ursinus'] athletic and environmental goals, the department of athletics, through its intramural, club and varsity programs as well as through its physical facilities and interactions with the general public, works to promote a sustainable culture in all of sport."