15 - Net Zero Energy from New Construction
The Oregon Model for Sustainable Development is a new campus policy that will require all future new development to achieve a net zero increase in campus-wide energy use. In the future, new construction and renovation projects similar to Allen Hall must be 35% more efficient than the Oregon Energy Code requirements. Also, energy savings measures will be implemented in existing facilities to offset the remaining energy generated by any new development project.

16 - Reuse and Retrofit - Willamette Hall
As you enter the Paul Olum Atrium through the recessed entry to Willamette Hall on 13th Avenue, imagine this site as it once was – a collection of ordinary science buildings. Rather than demolishing the old buildings, the university reused them, linking the old and the new to create one of the most well-liked places on campus. The exterior face of one of the original buildings is evident inside this efficient atrium that is neither air-conditioned nor heated. The building features a high percentage of daylit spaces, as well as indirect lighting and low ambient electrical lighting levels in non-lab areas.

17 - Green Chemistry Lab
If you peer in through the large windows at the very north end of Klamath Hall (past the double doors), you will see the first instructional green organic chemistry lab in the country. Students learn chemistry using less toxic solvents and reagents, causing less harm to themselves and the environment. This facility also promotes The Center for Workshops in the Chemical Sciences, which allows most faculty, post-docs, and graduate students the opportunity to learn about ways to use green chemistry in undergraduate programs for free.

18 - Bioswales on Campus
A series of landscape architecture students' design-build projects provides excellent examples of on-site drainage and habitat restoration, such as a highly effective bioswale that cleanses and absorbs stormwater then drains into the Millrace and the Willamette River (both of which flow through university property). Additional bioswales spread across campus cleanse and reduce rainwater runoff.

19 - Urban Farm
The Urban Farm, in operation since 1976, is unique nationally as the only hands-on urban agriculture working program housed in a landscape architecture department. It is an applied research facility as well as an outdoor classroom to teach organic gardening, producing 12,000 lbs. of food annually on 1.5 acres. Urban Farm students perform thousands of hours of community service every year working with intergenerational school garden projects, hunger relief initiatives, food security efforts and cross-cultural food justice projects. Urban Farm staff work hard to instill in students the desire to effect real change in the way food is grown. The interdisciplinary program has taught over 2,000 students from 92 different major programs at the UO.

20 - Sustainable Building Design - Ford Alumni Center
The Ford Alumni Center is in the process of attaining LEED Platinum certification. The 4-story atrium serves as a stack effect return air path to the penthouse, reducing ductwork and fan energy. The wood that gives the atrium its warm, welcoming ambiance is all FSC (Forest Stewardship Council) certified. Other sustainable design features include sustainable site selection, radiant slab heating, cork flooring, raised floors for efficient heating and cooling systems, white roofing membrane to reduce solar gain, open office design for ample daylight, and shared conference rooms to efficiently use space.

21 - Law and the Environment
The School of Law features the Environmental and Natural Resources Program, which pioneered the first curriculum in public-interest environmental law, and created the first public-interest environmental law clinic in the nation. Because of the students in the program, the school is able to host the oldest and largest annual public-interest environmental law conference in the world.

22 - Native Plants on Campus
Glenn Starlin Courtyard and the Many Nations Longhouse give an excellent introduction to many of Oregon's native plants. The plants demonstrate the inherent benefits of using hardy natives in landscape design. Inside the museum visitors can learn about native ecosystems and habitats. The nearby Many Nations Longhouse extends the use of native plants in the landscape onto the roof, where a "living roof" was planted in 2005.

23 - Sustainable Building Design - Children's Center
The Moss Street Children's Center, built in 2003, is an early example of meeting stringent energy efficiency requirements. It is more energy efficient than code requires with the help of enhanced thermal mass for passive cooling and night flushing, south-facing glazing for passive solar gain, radiant floor heating and cooling, and hybrid ground source heat pumps buried in 300-foot wells. The Center has received several awards for its sustainable construction and practices, including the Eugene Tree Foundation's Big Leaf Award for preservation of urban forest and a State Energy Efficient Design (SEED) award from the Oregon Department of Energy.

24 - UO Bike Program
The UO Bike Program strives to increase access to afforable, reliable, and sustainable transportation. The program provides a bike loan service to students, a do-it-youself maintenance shop where students can learn from knowledgeable staff how to take care of their own bikes, and great volunteer opportunities that impact the community. The Outdoor Program Barn (where the Bike Program is located) also features a rainwater catchment system for reusing rainwater in the building's washing machine and toilets.

25 - Daylighting Design
The School of Music and Dance's goal for the Frohnmayer Music Building (2008) was to connect the students in a supportive and sustainable environment. Daylighting, which was a focus of the design process, resulted in the featured light wells, solar shades, and light shelves along with the north-south exposure. The building's temperature is moderated through passive design strategies: exposed thermal mass, reflective roofing, and a green roof on the lower portion of the expansion. This building exceeds LEED Silver requirements, though it has not gone through the certification process.

26 - HEDCO Education Complex
The HEDCO Education Building, built in 2009, was designed to meet the State of Oregon LEED-Equivalent Silver standard. Sustainable design features include a stormwater management system (bioswales, rain water collection to water the lawn and green roofs), sensor-controlled faucets and low-flush toilets (30% lower water use than an average building), high performance glazing (projected to perform 32% better than standards), responsible materials (25% recycled content, 10% regional materials, and all low emitting), and reduced construction waste (75% below standards).

Visit the Campus Planning and Real Estate website for more information on the university's sustaniability initiatives and other campus tours:
http://uplan.uoregon.edu/

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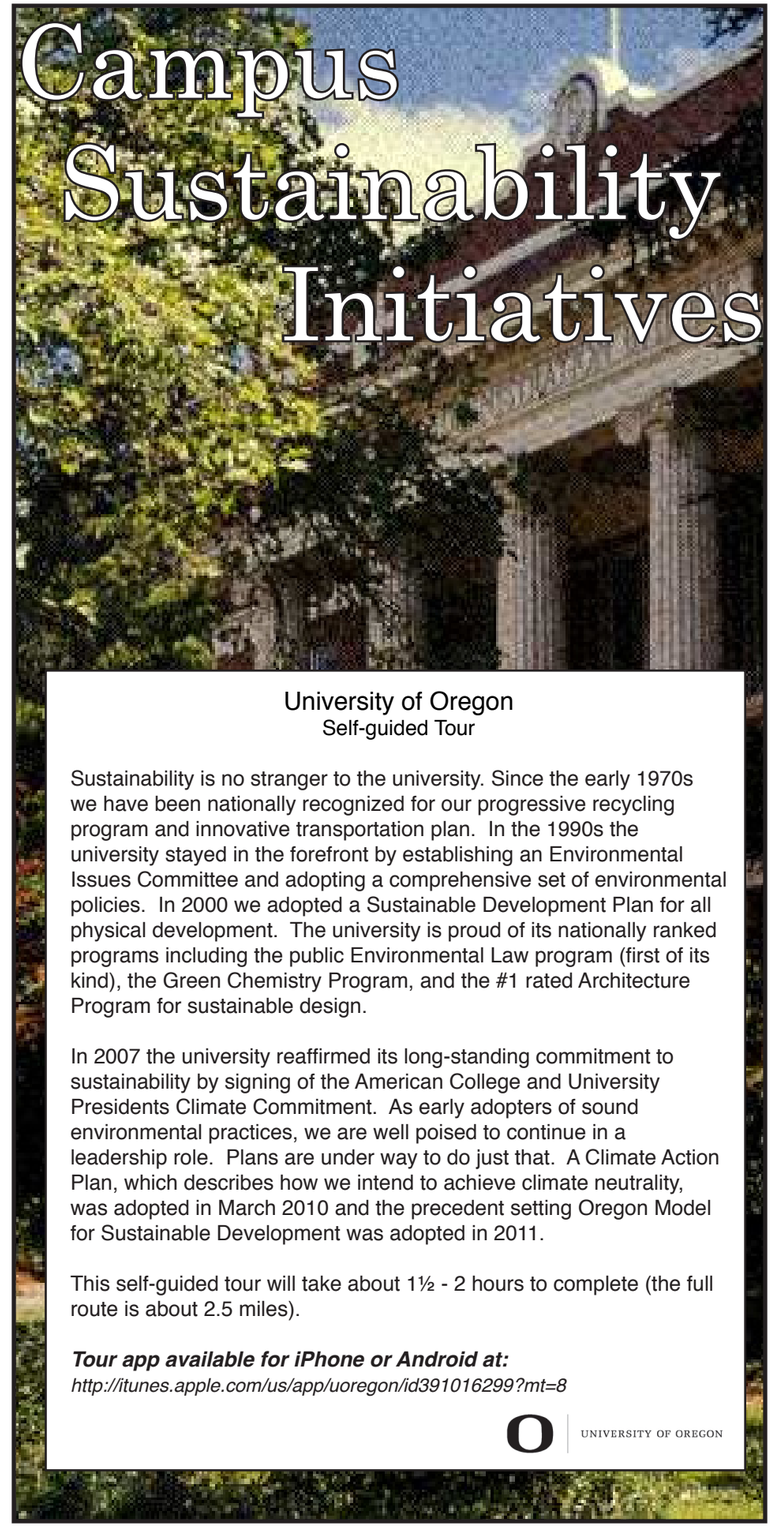

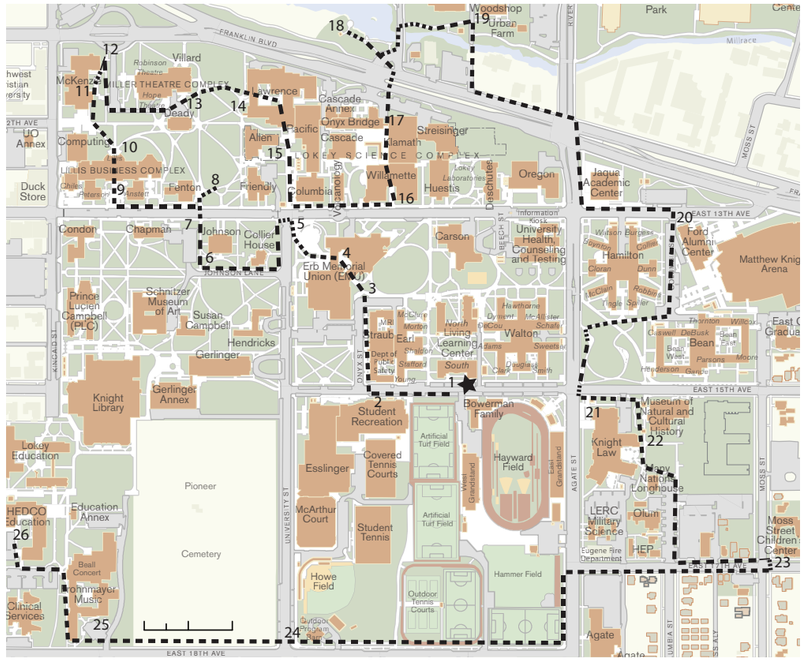

Begin at the Living Learning Center South on 15th Avenue (refer to #1 on the map).

1 - Sustainable Residence Halls
The Living Learning Center (LLC) was completed in 2004 and is a social hub for residence life. Dining centers on campus feature locally sourced foods, recycled paper products, and a compost service for paper and food products. The LLC incorporates many sustainable design elements and exceeds strict energy targets. The LLC features solar hot water heating, sun shades on southern elevations, and hot water reclamation. To help manage electrical lighting, the LLC also features appropriate initial lighting levels, occupancy sensors in resident rooms, and night setback controls on interior corridor lighting.

2 - Energy Generating Ellipticals
The Student Recreation Center features 20 elliptical machines that were retrofitted in 2009 to capture kinetic energy that feeds into the university's power grid. The machines are outfitted with "ReCardio" devices, which convert the kinetic energy to electricity. The elliptical displays the number of watt-hours that are generated during the user's workout. The goal of these machines is not as much to produce large quantities of energy as it is to educate thousands of students while they work out to better understand energy and how much energy is required to produce electricity.

3 - Solar Energy
Look up at the "solar umbrellas" on the EMU's east balcony, visible from the east lawn. Student investment in the 3 kW solar array on the roof provides the EMU with green, clean electricity to supplement its energy consumption. Much larger solar arrays have been installed on the Lillis Hall, Student Recreation Center, and Facilities Services Administration building. On a sunny summer day these systems can generate 1,000 kWh, or enough electricity to power 30 average-sized houses.

4 - UO Sustainability Center
The UO Sustainability Center serves as an umbrella organization that encompasses the majority of the student groups on campus focused on sustainability and the environment. The center is organized to be a resource for students and student organizations to network and campaign together to make collaborative campus-wide efforts for change. Some of the focus areas represented are food and landscapes; energy and transportation; equity, justice, and health; business and policy; climate and preservation; and, buildings and zero waste.

5 - Campus Recycling Program
The university's nationally recognized comprehensive Campus Recycling Program was established in 1990. Today it services more than 2,000 collection sites and recovers approximately 50% of the campus waste. A more recent food-composting program has reduced waste at major campus events by up to 80%. The program is student staffed and has earned national awards. The program's main focus is on resource conservation and waste reduction, which is integrated into all aspects of campus life.

6 - Awnings, Learn from the Past

Awnings such as these on Johnson Hall are making a comeback. We can learn a great deal from our historic buildings as their original designs often relied on what are now considered sustainable measures. Simple solutions to cool buildings, such as reducing the heat output from lights, enhancing ventilation and daylighting, and installing exterior awnings, are considered before high-tech solutions on campus. The *Campus Plan*, which emphasizes sustainable design practices, requires that new buildings have operable windows, a feature always found in historic buildings.

7 - Auto-free Zone
This bike-filled street was the main east-west auto route through campus until the spring of 1971 when students barricaded the street to protest against the traffic. Since then, this portion of 13th Avenue and most of central campus have been an auto-free zone (except for service vehicles). Instructional uses are sited to make sure students can travel by foot from one class to another during their 10-minute class breaks. In 2004 the Heart of Campus project created an auto-free plaza at the intersection of University Street and 13th Avenue. The plaza features planters that filter the stormwater runoff and permeable pavers that reduce runoff.

8 - Compatible Plants & Wildlife Habitat
This conifer quadrangle is well loved by students and wildlife alike. In order to increase and enhance the variety of bird and native plant species on campus, the university implemented the Wildlife Enhancement Project. Native undergrowth that is particularly attractive to many species of birds has been intentionally planted to create a bird corridor that extends from the Millrace to the Pioneer Cemetery. Tree snags are purposefully left throughout campus to provide wildlife habitat, and small birdhouses have been installed at various locations across campus.

9 - LEED Silver - Lillis Hall
Lillis Hall, completed in 2004, features the largest installation of architectural solar glass in the Pacific Northwest and has been recognized as one of the most environmentally friendly business schools in the nation. Lillis Hall, which houses the Lundquist College of Business, uses about 35% less energy than state code requires and incorporates a full spectrum of sustainable measures.

10 - Tree Protection
The approximate 4,000 trees on campus absorb an estimated 200 tons of carbon dioxide annually. The university went to great lengths to protect the mature trees in this area during the 2004 construction of Lillis Hall. During the design process designers had to reconsider their design proposal in order to make substantial efforts to protect tree roots during construction, including an innovative temporary bridge designed to span the root zones. The Campus Tree Plan, adopted in 2001, emphasizes the important environmental role trees play on campus.

11 - Reuse and Retrofit - McKenzie Hall
The small bioswale (area filled with pebbles) in McKenzie Hall's lower courtyard does not look like much, but it demonstrates how simple and inexpensive sustainable alternatives can solve big drainage problems that would have required substantial excavation and new piping. This bioswale was part of a major remodeling project that included installing efficient light fixtures, occupancy sensors, and carefully zoned energy efficient HVAC systems. Completing energy retrofits has been a common goal for decades.

12 - Alternative Modes of Transportation

The university is nationally recognized for its transportation innovation. Incentives to ride the bus include free bus passes for all faculty, staff, and students and easy access to campus transit stations. Bikes are strongly supported on campus. In fact, there are more bike parking spaces than car parking space on campus (the university has half the auto parking expected of a typical university). Only 11% of students who live off campus drive alone to and from campus; the rest walk, bike, carpool, or take the bus.

13 - Efficient Outdoor Lighting
Although the fixtures along this walkway look typical, they possess advanced features designed to increase energy efficiency and to minimize light pollution. Features include efficient 50-watt LEDs, which are projected to have a lamp life of 60,000 to 80,000 hours (vs. previously used High Pressure Sodium fixtures that had a lamp life of 24,000 hours). The LEDs are projected by EWEB (Eugene Water & Electric Board) to save 405 KWH annually. These fixtures are the prototypes for all future exterior campus lighting.

14 - Sustainable Design Education

The School of Architecture and Allied Arts is home base to numerous sustainable design research organizations and student groups such as the Ecological Design Center and the Institute for a Sustainable Environment. They provide unique opportunities for an education in sustainable design at UO. The undergraduate architecture program was ranked first in the nation for sustainable design in 2010. Undergraduate programs for interior architecture and landscape architecture were also ranked second and fourth, respectively, in 2010 for sustainable design. One example of a student-initiated sustainable design project is the Cobb Bench located just northwest of Lawrence Hall. The bench was designed and built by students through the Holistic Options for Planet Earth Sustainability (HOPES) conference, which is the only national ecological design conference established and maintained by students.