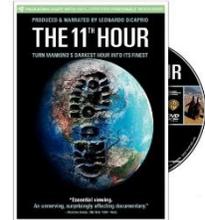


## YEAR ONE (2016/2017)

First year efforts began with the formation of a small work team (Resham Shirsat, Susan Ledlow, Shara Lee, and Gary Kokaisel) and a [Facebook page](#). A film and discussion of the [11<sup>th</sup> Hour](#) at West, East, and Osceola campuses in Fall 2016 served as the kickoff event for the EfS initiative. This proved to be a good approach to reach students, but not faculty. The next step was to develop a series of faculty development opportunities that would better engage faculty in conversations around sustainability in the classroom and the initiative's foundation building work.



### I. Faculty Development

The goal of the following faculty development short courses is to bring sustainability inspired concepts back into the classroom and therefore improve our students' sustainability knowledge and competency. It also helps the Valencia community raise their awareness about local organizations and efforts in our community which may align with Valencia's Impact Plan. These shorter courses were also intended to increase awareness and participation in the 2017 Destination track.

The learning outcomes from each site visit include:

- Define foundational concepts of sustainability including systems dynamics, scale, long-term development, tradeoffs, and interdisciplinary collaboration & participation.
- Connect the impact of individual behavior on broader social, environmental, and economic systems and ultimately on quality of life.
- Identify how the sustainability concepts and resources can enhance learning in the classroom.
- Create instructional materials that apply foundational concepts of sustainability to the classroom.

#### *Valencia Rooftop Aquaponics Center, Winter Garden: A Focus on Food*

UN SDGs: #2: Zero Hunger, #8: Decent Work and Economic Growth, #14: Life Below Water

On March 24, 2017, eleven faculty participated in a two hour site visit to Valencia's rooftop aquaponics facility to learn more about the college's sustainability efforts and how to integrate these concepts into the classroom for students. Topics included food safety and security, urban agriculture, and the impact of localizing food systems. Aquaponics is a closed loop system that cultivates fish and greens through a more natural process where fish waste is utilized and cleaned by plants with the cleaned water returned back to the fish. This center is a new resource for

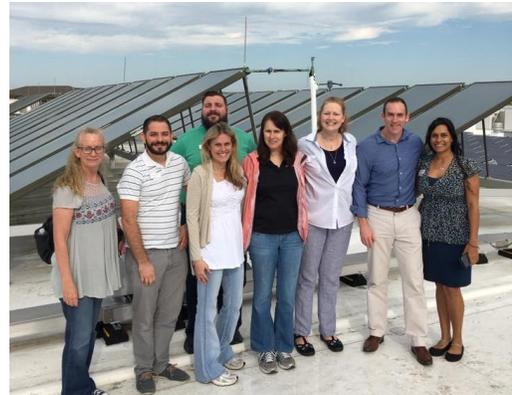


the existing horticulture program led by Dr. Javier Garces and foundational to the program's future specialization in Sustainable Agriculture. Students who take this track in the future will also learn aquaculture, hydroponics, and permaculture.

*IKEA, Orlando: A Focus on the Triple Bottom Line and Solar*

UN SDGs: #7: Affordable Clean Energy, #12: Responsible Consumption and Production

On March 31, 2017 nine faculty participated in a two hour site visit to IKEA to learn about what the triple bottom line looks like in action at a global business and how to integrate these concepts into the classroom for students. Topics included sustainable supply chain, transportation and shipping, zero waste, and renewable energy. After a presentation over breakfast and receiving some IKEA products to take home, faculty climbed a ladder leading up to the rooftop lined with 4,115 solar panels and solar hot water heaters producing approximately 1,421,500 kWh of clean electricity annually. This is equivalent to taking 192 cars off the road or powering 122 homes for a year.



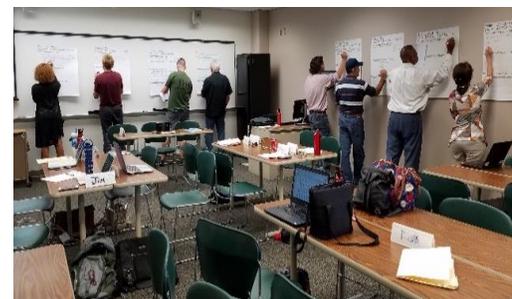
*Expert Rebekka Goodman, Arizona State University: A Focus on Sustainability Curriculum Integration*

On April 7, 2017 twelve faculty stayed on site to learn about integrating sustainability across the curriculum following a sustainability inspired Caffeine Buzz. Expert Rebekka Goodman from Arizona State University covered topics such as systems dynamics, scale, long term development, tradeoffs, collaboration and participation, and interdisciplinary.



*Destination 2017 - Sustainability: A Transformative Learning Experience*

In years past, a 20 hour hybrid faculty development course existed, and the first sustainability Destination track was a revamping of that previous offering. There are plans to reinstitute the 20 hour course again because of the quality projects that were created such as [Brian Macon](#) and [Debra Hollister](#)'s interdisciplinary [STEAM Sustainability Video Challenge](#).



In summer 2017, 15 faculty across all campuses completed the six week, 16 hour [Destination faculty development experience in sustainability](#). The completed sustainability infused lesson plans can be accessed through the [website repository](#).

Participants:

- defined foundational concepts of sustainability including systems dynamics, scale, long-term development, tradeoffs, and interdisciplinary collaboration & participation
- connected the impact of individual behavior on broader social, environmental, and economic systems and ultimately on quality of life
- created instructional materials that apply foundational concepts of sustainability to the classroom

## II. New Academic Programming

### Energy Management and Controls Technology

In 2016 Valencia College received a \$900,000 National Science Foundation (NSF) grant to develop a two year A.S. degree in [Energy Management and Controls Technology](#) (EMCT) program at West Campus. Led by [Dr. Lisa Macon](#), [Dr. Deb Hall](#), and Resham Shirsat, this degree will have a [Campus as a Living Laboratory](#) component and aims to target the enrollment of women and veterans. A strong Industry Advisory Council committed to the success of program graduates is made up by members from local government, utilities, large controls companies, hospitality and entertainment. Future graduates will work to ensure our cities operate efficiently, cost effectively, and in benefit of our shared energy and water resources.



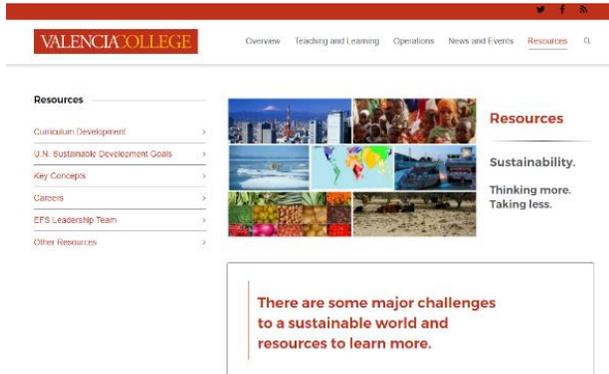
### Social Entrepreneurship



EfS Leadership Team member and New Student Experience faculty [Dr. Jerrid Kalakay](#) leads the social entrepreneurship development work at the college. Social Entrepreneurship is the use of the techniques by startup companies and other entrepreneurs to develop, fund and implement solutions to social, cultural, or environmental issues – “doing well by doing good”. At East Campus, Jerrid has developed

a course, a student club, and curriculum infusion opportunities. *“We need to create a more profitable and sustainable future for society. The economic, social and environmental issues and challenges that face our students today and tomorrow are growing increasingly more difficult and complex. We have a duty to prepare our students to tackle these challenges with leadership and innovation.”* Jerrid is also deepening relationships with local social enterprises that will benefit our students and community.

### III. New Website



A new website was created to catalogue the Efs work at the campus, curriculum, and community level through this five year initiative. This site is specifically intended to provides curriculum development support for faculty, career development resources for students, and local community connections in sustainability. This website grows everyday with new resources such as Valencia faculty lesson plans and special projects.

<http://sustainable.valenciacollege.edu/>

### IV. New Position

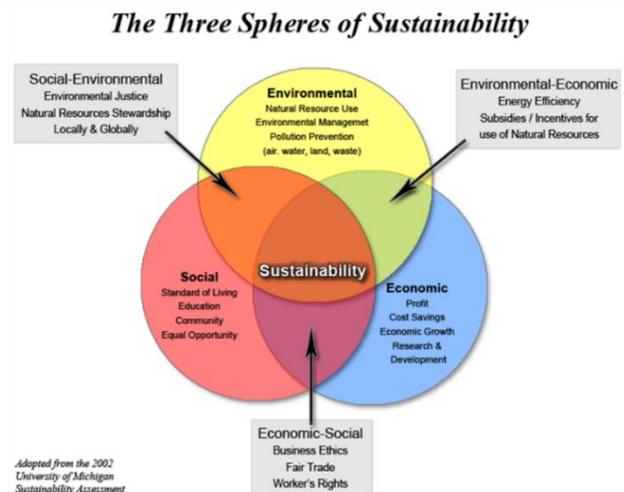
In June 2017, a new Director of Education for Sustainability position was created in the Office of Curriculum and Assessment within the Division of Academic Affairs and Planning. Resham Shirsat, former Director of Sustainability in the Division of Business Operations and Finance has transitioned into this role to provide the staff support needed to facilitate faculty connections, develop curriculum integration tools and pathways, and create community partnerships that align with Valencia’s Impact Plan.



### V. Clarifying Key Concepts

Year one work also included clarifying the key concepts that faculty must first understand in order to prepare our students to effectively think through the problems of sustainability. Sustainability is a way of looking at the world, and evaluating challenges and solutions through the lens of the following five key concepts. These concepts help students gain the top three skills needed in the future workforce (complex problem solving, critical thinking, and creativity).

- Systems Thinking
- Equity
- Scale
- Tradeoffs
- Collaboration and Participation



## VI. Community

### Urban Forestry Institute

In March, Valencia hosted the 2017 Urban Forestry Institute annual conference themed “Climbing to the Next Branch of a Managed Urban Forest”. This two-day educational training event is devoted exclusively to urban forestry with an opportunity to earn continuing education units (CEU’s,) learn about trees in the urban environment and network with sustainability professionals and elected officials from across the state of Florida.



Conference topics included:

- Creating High-Impact Urban Forestry Programs
- Using Tree Inventory or Canopy Analysis Data in the Development of Urban Forest Management Programs
- A Campus Urban Forest Management Plan in Action
- How to turn a Developing Community into a Managing Community
- Maximizing Coordination with Advocacy Groups and Communicating to the Public
- Tree Protection Ordinance Writing and Enforcement
- Communicating Urban Forestry Issues Across Departments and to Elected Officials

A tour of the campus grounds was led by the college-wide Director of Grounds with an interactive discussion regarding Valencia’s Tree Campus USA certification efforts. A conference presentation on sustainability efforts at the college was provided by the Director of Education for Sustainability. A growing part of the EfS work will be to develop mutually beneficially community partnerships and programs. One of the ways to accomplish this is through hosting educational events like this that can be easily accessed by Valencia employees and students.