ASU School of Sustainability
Arizona State University

schoolofsustainability.asu.edu
First-ever School of Sustainability in the U.S.A.

sustainability at ASU
Change Agents
protect our present
and ensure our future
Sustainability is "Treating the world as if we intended to stay"

Sir Crispin Tickell

People
Planet
Profit
SOS students are making a positive impact

✓ Identify issues that threaten the economy, society, our planet
✓ Find solutions
SCHOOL of SUSTAINABILITY students make a positive impact for Earth’s growing population.

- Designing high-quality-life CITIES
- Abundant, affordable, renewable ENERGY
- Ensuring clean and accessible WATER
- As farmlands diminish, protecting FOOD SUPPLY
- Planning for our future with SUSTAINABLE DEVELOPMENT
- Understanding the impact of SOCIAL TRANSFORMATION
- Mitigating and adapting to CLIMATE CHANGE

World Population:
- 1 billion in 1804
- 3 billion in 1960
- 6 billion in 1999
- 7.5 billion now

We will reach 9.6 billion by 2050 (carrying capacity of our planet)
Coffee is **sensitive to temperature increases**, which **reduce growth** and make it **more susceptible to pests**. With increasing global temperatures, major coffee-producing countries are suffering serious losses, **reducing supplies and driving up prices**. Coffee is the key source of revenue for an estimated **25 million farmers** in more than **60 tropical countries**.

Eight crops we’re losing to increased temperatures and water shortages:

- Beans
- Cherries
- Chocolate
- Coffee
- Corn
  
  *(and the animals that eat corn)*
- Maple Syrup
- Seafood
- Wine grapes
Crocodile gender is determined by temperature during incubation, only a 0.5 Celsius degree difference. Rising temperatures are forcing the birth of more female crocodiles and fewer males, which could lead to eventual extinction of the species.
The Marshall Islands Are Disappearing

- Most of the 1,000+ Marshall Islands in the South Pacific are less than 6 feet above sea level
- Rising saltwater has already penetrated and salinated underground freshwater supply
- Under a 1986 compact, the 70,000+ residents of the Marshalls are free to emigrate to the U.S.A., an influx of climate refugees as the water rises

Source: New York Times, Coral Davenport 12-02-15
• Salt water expands as it warms

• Sea level rise causes the displacement of billions of people and trillions of dollars in property losses

Sources: http://hdgc.epp.cmu.edu/teachersguide/teachersguide.htm
http://www.ipcc.ch/index.html
Sunny-Day Flooding in Miami: Researchers at the University of Florida have found that sea levels in the Southeast have risen six times faster than the rate of global increase since 2011.

Source: The Real Deal South Florida Real Estate News August 09, 2017
**Must Increasing Population = More Waste?**

The U.S. exports electronic waste (e-waste) to Kenya, India, and China.

Residents of Guiyu, China, one of the world's largest e-waste sites, have a 68% cancer rate.

- Consumerism
- Product Design
- Responsibility / Policy
Electronic Waste Laws

Source: electronicstakeback.com
Plastic Garbage Patches

http://www.youtube.com/watch?v=tnUjTHB1lvM

Photo: westhawaiitoday.com

Image: scoopit.com

- Eleven large gyres on Earth’s oceans
- Pacific gyre: estimated to be twice the size of Texas
- 15 feet deep on average, depths up to 90 feet
Marine life (our food chain) severely affected by trash

Photo: ecology.com

Photo: flashsparkle.blogspot.com

Photo: serc.carleton.edu
At the age of 16, Boyan Slat was diving in Greece.

"I saw more plastic bags than fish."

Slat invented an array of floating barriers, anchored to the sea bed, to catch floating debris.
The V-shaped array concentrates the plastic towards the center.

Ocean currents push plastic into a network of floating barriers.

Central platform extracts concentrated plastic and stores it for transport.

Storm-resistant barriers moored to the seabed.

The Ocean Cleanup Array is estimated to be 7900 times faster and 33 times cheaper than conventional methods.
“Nearly 40% of food in the U.S. goes to landfill …. we are not just wasting food, but also water, energy and resources that were used to grow that food.”

“Each year fewer Americans – less than 1% – claim farming as an occupation…”
How will we feed 9.6 billion people, 75% living in megacities, in 2050?

Pasona offices in Tokyo: 20% of building space dedicated to growing fresh vegetables

Photo: Kono Designs

Image: Gordon Graff
“...This type of differing consumption will not be an easy change for our nation. Yet, the first step can be made in academia. Bridging academia gaps, and understanding that all aspects of life are interrelated is the first step towards progress. Sustainable schools are aiding in this goal by creating transdisciplinary majors. With education our globe can not only envision change but share this image together.”
Every year the average person throws away 600 plastic bags

25% of litter in storm drains is plastic
Solutions

Photos: www.safesipp.org
Bachelor of Arts degree

International Development and Sustainability
Policy and Governance in Sustainable Systems
Society and Sustainability
Sustainable Urban Dynamics

Bachelor of Science degree

Economics of Sustainability
Ecosystems Sustainability
Sustainable Energy, Materials, and Technology
study Sustainability

at the Tempe campus

or the Polytechnic campus

or as an online student
Real-World Learning

Applied / Capstone Experience
Internships
Research Opportunities
Workshops
Service Learning
Field Experience
Study Abroad

Dr. Christopher Boone, Dean of the School of Sustainability, accepting the Bootstrapper Award for college with highest percentage of student entrepreneurs
International Summer Classes

Dubai (United Arab Emirates)

Sustainability, Tourism and Culture
Spain & Morocco

Energy, Sustainability across the Mediterranean

International Summer Classes

ASU School of Sustainability
Arizona State University
International Summer Classes
Washington DC & London
Comparing Sustainability across Cultures and Governments

Arizona State University
School of Sustainability
International Summer Classes

Equador

Diversity and Sustainability in the Andes
Global Intensive Experience

Cuba
Unlocked and on the Edge of Rapid Transitions
Costa Rica
Coffee and Climate in Costa Rica

Global Intensive Experience
International Courses in 2017

- Costa Rica
- Cuba
- Denmark
- Equador
- Hong Kong
- Nepal I and Nepal II
- South Africa

Image: earthobservatory.nasa.gov

ASU School of Sustainability
Arizona State University
Connect the dots

- Create and thrive in a relatively small school with about 500 fellow students
- Impact the world with internships
- Make a difference with a career you believe in
Undergraduate Employment

- Private Industry
- Government
- Academia/Education
- Non-profit/NGO
- Entrepreneurs
The world’s first so the world lasts
Just a sample of who is hiring our alumni...
Promoting human prosperity and well-being for all, while protecting and enhancing the Earth’s life-support systems.

ASU School of Sustainability
Board of Directors

Image: psychcentral.com
Stay up-to-date on upcoming School of Sustainability and Julie Ann Wrigley Global Institute of Sustainability events at http://schoolofsustainability.asu.edu/events/
School of Sustainability Alumni 2008-2015

In the U.S., only 27% of people have a degree-related job

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>Employment Rate</th>
<th>Sustainability Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>95%</td>
<td>48%</td>
</tr>
<tr>
<td>Master's</td>
<td>86%</td>
<td>91%</td>
</tr>
<tr>
<td>PhD</td>
<td>93%</td>
<td>86%</td>
</tr>
<tr>
<td>Ranking</td>
<td>Category</td>
<td>Source</td>
</tr>
<tr>
<td>--------------</td>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#1 in U.S.</td>
<td>Most Innovative</td>
<td>U.S. News &amp; World Report</td>
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<tr>
<td>#1 in Arizona</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#2 in U.S.</td>
<td>Best for Veterans</td>
<td>College Factual</td>
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<tr>
<td>#1 in Arizona</td>
<td></td>
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<tr>
<td>#5 in U.S.</td>
<td>Recruiting New Hires</td>
<td>Wall Street Journal</td>
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<tr>
<td>#1 in Arizona</td>
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<tr>
<td>#5 in U.S.</td>
<td>Best Qualified Graduates</td>
<td>Wall Street Journal</td>
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<tr>
<td>#1 in Arizona</td>
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<tr>
<td>#6 in U.S.</td>
<td>Fulbright Scholars</td>
<td>The Chronicle of Higher Education</td>
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<tr>
<td>#1 in Arizona</td>
<td></td>
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<tr>
<td>#6 in U.S.</td>
<td>Green “Cool Schools”</td>
<td>Sierra Magazine (6th out of 202 schools)</td>
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<tr>
<td>#1 in Arizona</td>
<td></td>
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<tr>
<td>#7 in U.S.</td>
<td>“Best Bang for the Buck”</td>
<td>Washington Monthly University Rankings</td>
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<tr>
<td>#1 in Arizona</td>
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<tr>
<td>#8 in U.S.</td>
<td>Best International Choice</td>
<td>International Education</td>
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<td>#1 in Arizona</td>
<td></td>
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<tr>
<td>#14 in U.S.</td>
<td>Peace Corps Volunteers</td>
<td>Peace Corps Top Colleges &amp; Universities</td>
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<tr>
<td>#1 in Arizona</td>
<td></td>
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<tr>
<td>Top 22 in U.S.</td>
<td>2014 Green Honor Roll</td>
<td>The Princeton Review</td>
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<tr>
<td>(of 832)</td>
<td>Perfect Score of 99</td>
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<td>#1 in Arizona</td>
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<tr>
<td>#33 in world</td>
<td>Patents issued to researchers</td>
<td>National Academy of Inventors</td>
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<td>#79 in world</td>
<td>Top 100 World Universities</td>
<td>Academic Ranking of World Universities</td>
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<tr>
<td>#1 in Arizona</td>
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<td></td>
<td>‘Best Buy’ Public Colleges</td>
<td>FISKE Guide to Colleges 2015</td>
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<td>America’s Best College Buys</td>
<td>Forbes Investment Report</td>
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<td></td>
<td>Volunteering, Service Learning, and Civic Engagement</td>
<td>President’s Higher Education Community Service Honor Roll</td>
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</tbody>
</table>
Core Competencies

1. Systems Thinking
2. Future Thinking
3. Normative Thinking
4. Strategic Thinking
5. Collaborative Thinking

Sustainability courses ensure students graduate with critical-thinking skills and a mastery of key knowledge and methods in sustainability.
Meet ASU admission requirements

- ABOR GPA 3.0
- and
- Top 15%
- or
- 1120 or higher SAT (1040 if taken prior to March 2016)
- or
- 22 or higher ACT

No high school math competency deficiency

https://schoolofsustainability.asu.edu/admissions/financial-aid/
https://schoolofsustainability.asu.edu/admissions/scholarships-grants/
Transferring to ASU SOS

ASU accepts transfer credits for traditional course work successfully completed at regionally accredited colleges or universities.

Use https://transfer.asu.edu/credits to see how undergraduate credits you completed at another college/university will transfer to ASU.

To request a transfer course evaluation, sign in with your ASURITE UserID and click on Submit Course for Evaluation.

Official transcripts must be mailed or sent electronically directly to Admission Services by the records office of the issuing institution.
## Transfer Admission Requirements (BA/BS)

<table>
<thead>
<tr>
<th>Admit</th>
<th>Transfer/Readmit:</th>
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<tbody>
<tr>
<td></td>
<td>Transfer GPA 3.0</td>
</tr>
<tr>
<td></td>
<td>Transfer GPA between 2.75 and 3.0 will be sent to department for review</td>
</tr>
</tbody>
</table>

| In Review | Students (with 12 or more transfer hours after high school graduation) are required to have a cumulative transfer GPA of 2.75 or higher. |

The following criteria must be met:

- 3.0 or greater in the most recent semester; **AND**
- SOS 101 or particular math course w/ “B”; **AND**
- SOS 110 or environmental science related course w/ “B”; **AND**
- SOS 111 or sustainability related course w/ “B”; **AND**
- ENG 101, 105, 107 or similar course w/ “C”.
Transfer Student Financial Aid

File your FAFSA beginning **January 1** of each year. Submit your FAFSA before ASU's priority filing date of **March 1** to maximize the amount of financial aid you receive when you transfer to ASU. We encourage you to submit your FAFSA even if the priority filing date has passed. The FAFSA is a **free** application, so avoid online scams requesting payment.

Need-based scholarships require completion of the FAFSA. You can find a list of scholarships for transfer students at [https://transfer.asu.edu/transferawards](https://transfer.asu.edu/transferawards)

Continue searching for scholarships throughout the year as new scholarships are posted regularly.