



WELCOME GUIDE

PROVIDING RESOURCES AND GUIDANCE TO
ENABLE SUSTAINABLE LAB PRACTICES



INTRODUCTION

Welcome!

Whether you are a new or current Principal Investigator, lab manager, or student, we hope to inspire sustainability within your daily research and lab practices.

To make things easier, we have compiled checklists of simple 'green tips' to incorporate into your lab. The checklists are organized by the following sustainability categories:

- 1) Save Energy
- 2) Conserve Water
- 3) Reduce Waste
- 4) Purchase Sustainably
- 5) Build Community

Thank you for your efforts in helping to make UCI a more sustainable and resilient campus!

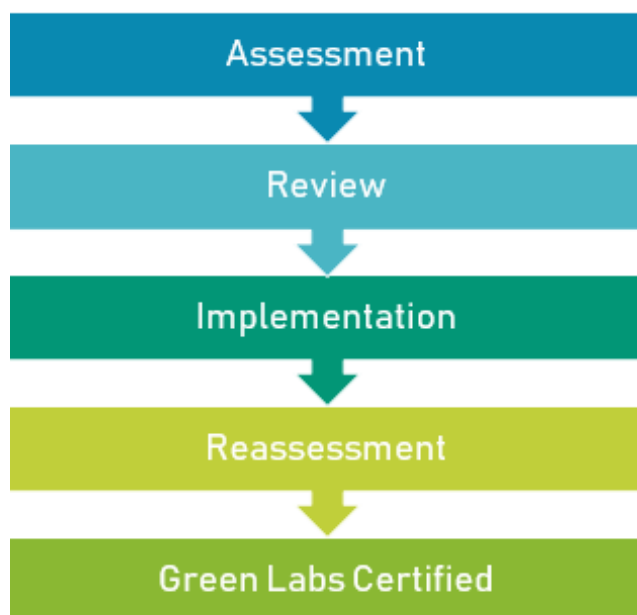


ABOUT UCI GREEN LABS

Why Green Labs?

UCI labs make up 20% of campus building space and consume more than 60% of campus energy. The UCI Green Labs program aims to reduce laboratory energy consumption while also creating opportunities for waste reduction, water conservation, and sustainable purchasing. Program participants demonstrate understanding and growth in sustainable lab practices to become UCI Green Labs certified.

Certification Process



Certification Levels

> 80%	Green
70 – 79%	Platinum
60 – 69%	Gold
50 – 59%	Silver
40 – 49%	Bronze

Participation Benefits

- Prolong equipment life to increase efficiency & cut costs
- Reduce laboratory carbon footprint
- Recognition for sustainability efforts on grant applications
- Strengthen team building & community with other labs
- Promotion of lab as a sustainability champion

SAVE ENERGY



- ☐ [Close fume hoods](#) when not in use.
- ☐ [Chill up](#) ultra-low temperature (ULT) freezers from -80°C to -70°C .
- ☐ [Turn off lights](#) when daylight is adequate and when you leave the room.
- ☐ Shut down computers and turn off monitors before weekends and breaks. Place [reminder stickers](#) on devices.
- ☐ [Use and maintain outlet timers](#) to avoid keeping equipment on all night.
- ☐ Place [reminder "turn off" stickers](#) on equipment to reduce unnecessary energy usage.
- ☐ [Defrost freezers and/or remove ice buildup](#) to maintain low-temperature freezers.
- ☐ [Clean fridge and freezer coils](#) every 6 months to avoid excess energy usage and costly repairs.
- ☐ Maintain freezer performance by [conducting clean-outs](#) every 6 months.



DID YOU KNOW?

When left fully open, one 4-foot fume hood at UCI consumes **13,900 kWh** of electricity and **1,180 therms** of natural gas per year. This is equivalent to the *combined* amount of energy used on average by **two homes and two cars** in the state of CA per year!

CONSERVE WATER



DID YOU KNOW?

A leaky faucet dripping at the rate of just one drip per second can waste more than **3,000 gallons** per year. That's the average amount of water needed to take **180 showers!**

- ☐ Run autoclaves and dishwashers at full capacity and put them into standby mode when not in use.
- ☐ Report water leaks to Facilities Management for repair.
- ☐ Try alternatives to single-pass cooling to save water and prevent the risk of flooding.
- ☐ Use timers for water valves to set minimum necessary time.
- ☐ Use tap water or lower purity water instead of DI water when acceptable for experiment.
- ☐ Install low-flow aerators to faucets to reduce water consumption.
- ☐ Install Water Mizers (or a similar water-saving product) on sterilizers and autoclaves.
- ☐ When doing field work, use sustainable water techniques such as drip irrigation and soaker hoses.

REDUCE WASTE



☐ Minimize the use of disposable items. Consider using glassware instead of plasticware whenever possible.

☐ Does your lab need more blue recycling bins? Place an order request with [Facilities Management](#) or call (949) 824-5444.

☐ Locate where you can safely recycle used battery and ink cartridges on campus [here](#).

☐ Become familiar with the Peter's Exchange [free e-waste \(electronic waste\) pick-up program](#).

☐ Recycle large pieces of Styrofoam in one of the designated Styrofoam recycling bins on campus. See [here](#) for map.

☐ Reuse old boxes and containers for dry ice.

☐ Per campus standards, [purchase 100% recycled copy paper](#).

☐ [Learn about the take-back programs](#) companies offer for lab products.

☐ UCI has more than [160 water bottle filling stations](#). Refill your reusable water bottle.



Green Tip!

UCI labs recycle aluminum foil, clean solvent bottles, flattened cardboard, plastic pipettes & bottles and cans. Just make sure all materials are clean and dry! Download the lab recycling sign [here](#).



PURCHASE SUSTAINABLY



- ☐ Maintain an inventory of supplies, equipment, and chemicals to avoid duplicate or unnecessary purchases. Download the [UC Chemicals app](#) for inventory management.
- ☐ Before purchasing new items, check with surplus sales inventory at [UCI's Peter's Exchange](#).
- ☐ Check for eco-labels such as [Energy Star](#) and [ACT](#) when making purchases.
- ☐ Reduce the use of hazardous chemicals when possible with [green chemistry alternatives](#).
- ☐ Only ship overnight or rush when absolutely necessary.
- ☐ Purchase from vendors who strive to reduce packaging waste. For example, [Thermo](#) has a cardboard box alternative to Styrofoam coolers.
- ☐ Consolidate orders and order only what you need. If you need a small amount, consider asking for a sample instead.



DID YOU KNOW?

You can easily locate energy and cost-saving lab items through [Ecomedes](#), an online tool listing products that meet UC's sustainable procurement criteria.

BUILD COMMUNITY



Green Tip!

When seeking supplies, ask neighboring labs for any extra chemicals, glassware, equipment, or Styrofoam containers prior to making new purchases.



- ☐ Appoint a lab member as a champion or point person for sustainability.
- ☐ Integrate sustainability into existing lab roles and duties. Who oversees purchasing? Maintenance issues and requests? Cleaning and lab operations?
- ☐ Incorporate sustainability into your team meetings. Choose one new sustainability topic to review and discuss during each meeting.
- ☐ Participate and attend sustainability events. Check out the events page on the [UCI Sustainability website](#).
- ☐ Check out [My Green Lab's Training Videos](#) to learn about communicating laboratory sustainability with your team.
- ☐ Notify neighboring labs when you have excess equipment or supplies to share.
- ☐ Promote sustainable practices to neighboring labs to increase awareness.

FOR MORE INFORMATION...

Visit the UCI Green Labs website to learn more about laboratory sustainability and to sign-up for the lab certification program.

➔ sustainability.uci.edu/green-lab



Druffel Research Group