IMAGINE U

2014

STUDENT INNOVATION

@ the U

and 20 tips to become an

innovator creator maker
influencer entrepreneur
THE 20 TIPS

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Welcome to the University of Utah

As a world-class research institution, the University of Utah celebrates innovation and the process of discovery. We believe that here in Salt Lake City at the foot of the majestic Wasatch Mountains, we have built something unique — a vibrant learning community where students and faculty from a wide variety of disciplines come together to explore possibilities, pursue ideas and create solutions to real-world challenges.

You’ll find this spirit of interdisciplinary collaboration and entrepreneurship throughout our campus. We believe it is the spark that animates the university’s culture, enhancing the educational experience for all students. No matter what the field of study, our students are encouraged to pursue their ideas towards discovery and broad-reaching positive effect.

Our results are impressive — each year, our research generates dozens of patents and hundreds of inventions. I encourage you to learn about our remarkable students and their recent success on the following pages.
THINK LIKE AN INNOVATOR

DON'T WORRY ABOUT MISTAKES

ATTEND THE U (duh!)

BELIEVE IN YOURSELF

INSERT CHOCOLATE (you're gonna need it)

JUMP IN HEADFIRST

FIND YOUR PASSION (look in this book)
You'll be surprised by what tools you will need. Gather as many as you can.
Undergrads Turn Algae into Fuel

Using algae as an alternative biofuel is not new, but two undergraduates in chemical engineering may have found a way to commercialize it on a large scale — something that researchers have not yet figured out how to do. Sophomores Tyler Lee and Samuel Doane are developing a bioreactor system capable of extracting oil from algae — a lot of algae. If successful, their reactor could be scaled to an industrial size and may help reduce dependence on fossil fuels. "We have to think on our feet," Lee said. "It is well known that algae holds oil, but it’s a race to figure out how to extract it on a mass scale."

Connect2Health Builds a Healthier Community

Modern dance major Amanda Newman has found a way to combine passions for dance and public health. After participating in an Honors Praxis, Newman began noticing a gap between health-care resources and the ability for underserved populations to access these resources. With the help of the Honors College’s faculty, Newman and pre-medical student Dash Porter began the Connect2Health program to connect patients to the resources they need to build healthier lives. Since the program opened in August 2012, Connect2Health has served over 1,000 patients. The team currently consists of 29 student volunteers.

Refugee Program Makes Global Impact

Three honors students are solving international issues through a refugee program they started that pairs college students with high-school-aged student refugees for at least a year to help them with school work, standardized tests and any other college prep. The students behind the project are Melinda Adams, Megan Dolle and Brinadee Pierson. Adams started the project after discovering only one in five refugee scholarships are being used. “There are many resources for the refugees in the Salt Lake City area, but not many of them know how to use them,” Pierson said.
LAUNCH A COMPANY

#4

Start with a GREAT IDEA!

RAID PIGGY BANK
(don't quit your day job)

DON'T TAKE 'NO' FOR AN ANSWER (it's investors' favorite word)

GET HELP
The U has lots of people, programs and courses

START SELLING
Test the market. Listen to your customers

REAL WORK
Prototyping, form team, take over parents' garage, business plan

START WITH CLIMB?

You have finally arrived!

JACKPOT!
(NOTE: Payoff may be experience, not money)
Students Take Control of Their Futures by Founding Startup Companies.

Starting a company is one of the best ways to learn how to become an innovator. With the help of the Lassonde Entrepreneur Institute at the U, many students are doing just that. They are taking novel ideas and products and carving their own paths in business and life.

Fetch Food Makes Food Delivery Easy

Fetch Food has one of the cheapest and fastest food delivery services in Salt Lake City. Thanks to a streamlined and completely online delivery service, the company is rapidly expanding. It has already achieved $90,000 in sales and has a growing base of restaurants that rely on it for delivery. “I’ve always wanted to be an entrepreneur. I want to build something that will impact the world,” said Karthik Raman, the founder of Fetch Food and a biology student at the U. The company is based on a routing algorithm to make deliveries efficient and inexpensive. Fetch Food got an early boost from a $5,000 prize from the U’s Opportunity Quest competition and a seed grant from the Entrepreneur Club.

Fetch Food is a growing food delivery service in Salt Lake City.
The Queen's Tea Helps the Homeless One Cup at a Time

Two U students are following their dreams — and taste buds — with the launch of their tea company, The Queen's Tea. After discovering a mutual interest in the popular beverage and being discouraged by the boring selection available at the supermarket, the pair decided to turn their hobby of making their own teas into a business. A year later, with a blend of history and science, Seth Anderson, a graduate student in history, and Michael Ferguson, a graduate student in bioengineering, are preparing for the launch of their new line of teas and corresponding non-profit charity, DigniTEA, which will provide food, water, clothing and other essentials to Salt Lake City's homeless youth. “We partnered with the Homeless Youth Resource Center in Salt Lake City to create a sustainable mechanism for financial support,” Anderson said. “Five dollars from the sale of every tin or bag of DigniTEA will be donated.”

SunCatcher Energizes Canopies

Outdoor events won't be the same if a group of graduate students are successful with their plans. They launched a company, SunCatcher, that is developing a new type of portable canopy that uses solar panels to generate power while providing shade. The product is uniquely designed to allow the canopy to constantly face the sun while providing shade and shelter. Team members include Abbey Ehman (a masters of real estate development student), Jesse Smith (a masters of electrical engineering student) and Rocky Kerr (an MBA graduate from the class of 2013).
When Cam Cameron started his MBA, he had no idea he would launch a company. Then he took the Venture Foundations course. What followed was a passionate effort to lower the price of soccer cleats and provide the world with shoes by players for players. “Soccer can change your life for the better, and all players should have the opportunity to experience the purity of the most beautiful and most popular game in the world,” Cameron said.

Student startup SimPayX is developing a mobile payment platform that allows people to search for the best product for their needs based on price, inventory and brand, and they won $5,000 in the U’s techTITANS competition to advance their idea. Based on a patent-pending authorization algorithm, SimPayX reduces the security threat in a mobile payment. The team consists of Rob Brown, Anuj Gupta and Shreyas Kamat. Brown and Gupta are enrolled in the U’s masters of science in information systems program.

Guided by a desire to make creating websites easy, Joshua Maag and Emma Frost launched SquareHook in 2012 — and they haven’t looked back. They started the company while pursuing MBA degrees at the U. Their platform allows people with no technical knowledge to create, launch and manage websites. They recently added an ecommerce feature and surpassed the 200 website milestone.

Cam Cameron launched his company Just Play Cleats to make quality soccer shoes more affordable. MBA graduates Joshua Maag (right) and Emma Frost are behind SquareHook.
Cupcake Idea Takes Student from ‘Cupcake Wars’ to Franchise in Mumbai, India.

University of Utah alum Erik Larsen started a cupcake company in the U’s Foundry program and had no idea what would happen next. The idea exploded, taking him to the Food Network’s “Cupcake Wars” and leading to the chance of a lifetime.

When University of Utah student Erik Larsen sent in his promo video for the Food Network’s hit reality show “Cupcake Wars,” he had no way of anticipating that in just a few years he and his family would be opening one of the first cupcake franchises in India.

But now, Erik and his wife Cori are celebrating the grand opening of their first cupcake shop in Mumbai, which took place on Valentine’s Day 2014.

“It’s been a lot of trial and error,” said Erik, a graduate of the U’s department of communication. “We’ve had to face a lot of cultural barriers. For example, in India, no one has ovens; most people cook over an open flame. We are training a guy right now who had literally never seen a spatula or a whisk and who had never seen a cupcake before.”

Erik got his start in the cupcake business in 2010 when he founded Heaven Cupcake with the help of the U’s Foundry program, a 12-week program provided by the Lassonde Entrepreneur Institute and open to all U students passionate about entrepreneurship.

What began as a small shop soon grew into a recognized brand as the Foundry connected Erik with the resources he needed to design a logo, create a website and develop a promo video for “Cupcake Wars.”

As a result, Erik was the first baker from Utah featured on the show, an experience so successful the network kept inviting him and Cori back. After their third appearance on “Cupcake Wars,” Erik and Cori received an interesting offer from executives at an India-based company who had seen their performance.

“About two years ago, cupcakes became very big in India, but no one has started a franchise yet,” Cori said. “And no one (in India) understands cupcakes that well so the company thought, ‘why not fly in an American brand?’”
Drawn to Erik’s energy and charisma, the executives from Mumbai knew they had found their brand. “Maybe we didn’t win ‘Cupcake Wars,’ but the fact that the company saw Erik on it and really liked his personality — that was it,” Cori said.

Erik, Cori and their daughter Lily arrived in India in September 2013, and since that time the family has traveled all over India sampling cupcakes, experimenting with recipes, and acting as the spokespeople for the new brand. While these developments have forced Erik and Cori to put their degrees to the test, the family has enjoyed experiencing the excitement of a new culture.

Thinking back over how far Heaven Cupcake has come and how far they still have to grow, Erik said, “The Foundry was everything to us; we wouldn’t have a logo, we wouldn’t have a website, we wouldn’t have our search engine optimization done without it. I don’t know if we could have done it without that community around us.”

In the three years since launching, the Foundry has worked with hundreds of entrepreneurs and helped develop dozens of operating companies that have generated millions of dollars in revenue. But the Foundry’s impact reaches much further than corporate development by focusing on developing successful entrepreneurs, not just companies.

“The Foundry alumni are building great careers,” said William Schulze, a professor at the David Eccles School of Business. “I just got an email from a 20-year-old student who announced that he is retiring. I guess he has enough money now to live on for a while.”

Whether it’s a large company like Armor Active, which grew to over $3 million in value in its first year, or a cupcake company based out of Salt Lake City, the Foundry helps entrepreneurs transform their dreams into reality.

While Erik and Cori are thrilled with the success of Heaven Cupcake, they are already making plans to continue creating in the future. Inspired by the elaborate detail of Indian fashions, Erik and Cori are currently building a new clothing company based out of New York.

“We love doing cupcakes, but it’s always exciting to have a new challenge — one without an expiration date,” Cori said.

Whether living in Mumbai or New York, whether creating cupcakes or clothing, Erik and Cori continue looking forward with optimism, always watching for new markets and new opportunities for innovation.

“You have to keep moving,” Cori said. “There will always be moments of complete frustration when you ask yourself ‘Why are we doing this? Why are we trying to teach people who have no idea what a whisk is how to bake? This is insane!’ But that’s what makes it fun, to know that this is kind of crazy and we are going to do it.”

Top to bottom: A cupcake prepared by Erik and Cori Larsen, and the Larsens at their first store in India.
Students are getting a first-hand look at what it takes to predict the weather in the Ute Weather program — and their work touches thousands of people every day. Their forecasts are broadcast by news agencies across the region, their tweets are seen by thousands, and they provide some of the most accurate forecasts for the U area.

“The program is two-thirds weather and one-third teaching experience,” said Adam Abernathy, an atmospheric science undergraduate student.

Abernathy has been working to revamp the Ute Weather program with Kevin Perry, chair of the atmospheric sciences department. They turned the program around to make the forecasts more reliable and the experience more rewarding for students. “If students hadn’t shown initiative, this wouldn’t have happened,” Perry said.
A U program that pairs graduate students in architecture with Navajos that need new homes, DesignBuildBLUFF is doing much more than providing an educational experience. Not only do students design the homes and build them from the ground up in less than a year, they also learn how to adapt to new cultures and really listen to what a client wants. Navajo culture values different things than mainstream America, and students learn how to navigate these preferences. “As architects, designers and planners, we design the world we live in, and I want to be part of that,” said Emily Black, a graduate student in architecture and a DesignBuildBLUFF team member. “I have always thought I want to get involved and make my contribution.”
Few programs give the same in-depth experience provided by DesignBuildBLUFF.
"The world has so many problems and opportunities where I can help, and before they can be significantly addressed, they need to simply be understood."

— Beau Freckleton, mechanical engineering major / page 28

"I, as a college student, can make a difference.

— Megan Dolle, international relations major and co-founder of a refugee mentor program / page 5

"There will always be moments of complete frustration ... but that's what makes it fun."

— Cori Larsen, Heaven Cupcake co-founder / page 10

"Why not live with the hope that today might be the day. Today might be the day the world starts to change."

— Amanda Newman, modern dance major and founder of Connect2Health / page 5

"As architects, designers and planners, we design the world we live in, and I want to be part of that."

— Emily Black, graduate student in architecture / page 14

"The world has so many problems and opportunities where I can help, and before they can be significantly addressed, they need to simply be understood."

— Nathan Cheever, economics major and Innovation Scholar

"Mentoring is important to keep this network of creating and innovation for the kids."

— Derek Jewell, biomedical engineering major and co-founder of a FIRST LEGO League mentor program / page 27

"As a student, this is the time when we are young, excited and involved."

— Kendahl Melvin, political science major / page 27

— Beau Freckleton, mechanical engineering major / page 28

— Megan Dolle, international relations major and co-founder of a refugee mentor program / page 5

— Lynn Unger, master of social work graduate / page 30

— Kartik Raman, biology major and founder of Fetch Food / page 7

— Cori Larsen, Heaven Cupcake co-founder / page 10

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— Kendahl Melvin, political science major / page 27

— Beau Freckleton, mechanical engineering major / page 28
The world has so many problems and opportunities where I can help, and before they can be significantly addressed, they need simply to be understood.

(Don’t) settle for something (you) don’t feel 100 percent passionate about.

I want to build something that will impact the world.

As a student, this is the time when we are young, excited and involved.

If you are not afraid to fail and not afraid to succeed, you never know what might happen.

Mentoring is important to keep this network of creating and innovation for the kids.

There will always be moments of complete frustration... but that’s what makes it fun.

I, as a college student, can make a difference.

- BEAU FRECKLETON, mechanical engineering major / page 28
- MEGAN DOLLE, international relations major and co-founder of a refugee mentor program / page 5
- LYNN UNGER, master of social work graduate / page 30
- KARTHIK RAMAN, biology major and founder of Fetch Food / page 7
- CORI LARSEN, Heaven Cupcake co-founder / page 10
- CHAO HUANG, Ph.D. student in bioengineering / page 19
- NATHAN CHEEVER, economics major and Innovation Scholar
- DERIK JEWELL, biomedical engineering major and co-founder of a FIRST LEGO League mentor program / page 27
- KENDAL MELVIN, political science major / page 27

#8

get inspired

What drives you? Find your love, and go after it.

As architects, designers and planners, we design the world we live in, and I want to be part of that.

This is very different than just homework and engineering; it’s about trying new things.

Why not live with the hope that today might be the day. Today might be the day the world starts to change.

- EMILY BLACK, graduate student in architecture / page 14
- AMANDA NEWMAN, modern dance major and founder of Connect2Health / page 5
- CHAO HUANG, Ph.D. student in bioengineering / page 19

As so many problems and opportunities where I can help they can be addressed, they need understood.

(Don’t) settle for something (you) don’t feel 100 percent passionate about.

- CHAO HUANG, Ph.D. student in bioengineering / page 19

This is the time when we are young, excited and involved.

- NATHAN CHEEVER, economics major and Innovation Scholar
Mechanical engineering students Jessica Kuhlman, Scott Ho and Andy Thompson developed a mechanical leech to replace biological ones used in post-surgical tissue reattachment treatment. Addressing biological leech drawbacks, the cost-effective device reliably reduces blood pooling and pressure, precisely injects anti-coagulants into the therapy site, and eliminates the “ick” factor. The mechanical leech was named runner-up in the U’s 2013 Bench-2-Bedside competition. It also placed third among undergraduates at the nationwide 2013 Collegiate Inventors Competition.

Mechanical engineering students invented a product to improve post-surgical treatment.

A mechanical leech prototype.

#9
Put your ideas to the test, and create something new.

INVENT SOMETHING
Heart surgery is the primary method for correcting congenital heart defects in newborns. A major risk of heart surgery is damage to specialized tissue of the conduction system, which generates and propagates electrical impulses necessary for the heart to pump blood throughout the body. Even through the trained eye of a surgeon, it is impossible to discriminate this specialized tissue from the surrounding heart muscle during surgery as it lies beneath the heart's surface.

“Currently, surgeons rely on guidelines developed from anatomical studies to approximate where it is safe to make an incision or place a suture,” said Chao Huang, a Ph.D. candidate in the department of bioengineering. “Serious complications can occur if this specialized tissue is damaged — usually requiring an artificial pacemaker to be implanted.”

In an effort to improve outcomes in these surgeries, Huang is working to develop a microscopic imaging approach that surgeons can use to discriminate between different types of heart tissue in real-time.

“There were several challenges to this project,” Huang said, “including what features, if any, could be used to discriminate this specialized tissue from other cardiac tissue types, and how to image below the surface of the heart in order to visualize these specialized tissues without disrupting the tissue integrity.”
Using an approach based on a recently introduced fiber-optics confocal microscopy system — specialized imaging microprobes and a fluorescent marker of the extracellular space — Huang demonstrated that the specialized tissue of the conduction system could be identified based on its microstructural arrangement. In addition, Huang demonstrated that by configuring the optical properties of the imaging microprobe, images of the specialized tissue could be acquired below the heart surface in a living rat heart.

“We are currently pursuing strategies to further translate our established microscopic imaging approach into the clinical environment,” he said. “In particular, we are exploring FDA-approved fluorescent dyes and development of imaging microprobes specifically for imaging in pediatric hearts.”

By using components that are already FDA-approved, Huang hopes to reduce the number of barriers needed to move the imaging approach into a clinical setting. He believes that the established approach will allow surgeons to reduce the risk of injury to the conduction system during heart surgery and could lead to significant advances in various other surgical disciplines as well.

Huang decided to pursue a Ph.D. in bioengineering after working in industry as an electrical engineer.

“I finally found my passion in life,” he said. “It took going down some tortuous paths, but now I know that my role in life is to develop life-saving technology. I would advise any student not to settle for something they don’t feel 100 percent passionate about.”
MAKE A VIDEO GAME

Overcome self doubt. New tools make creating a game easy.

Find a team. Identify tools. Define game objectives. Get started.

Decide what type of game you want to make - a blockbuster, a social commentary ...

CRY (again)

Design (again)

Test (again)

Create (again)

Development Cycle

No more lives

Game Over

Eureka! It Works!

Game On!
Video Games Are Pouring Out of EAE Program at the U.

The Entertainment Arts and Engineering program at the University of Utah has been receiving national accolades — and for good reason. The students in the program are consistently producing compelling games that are gaining widespread attention and commercial success.

‘Cyber Heist’: A Crime Game with a Twist

While some may dream about hacking into computers to clear their student debts, one group of EAE students is aiming to make that dream possible — in the videogame world, at least. “Cyber Heist” is a two-player game where players take the role of either a hacker or thief and work together to break into a futuristic Department of Education to wipe out all student debt. “We are trying to achieve a couch co-op feel,” said Jake Muehle, a graduate student in the EAE program and one of the game’s lead designers. “The game is designed for the two players to interact, talk to each other and help the other player through the game experience.” The game was named a finalist of the Independent Games Festival Student Showcase — beating out 350 entries from around the world and across all gaming platforms.
‘Magnetic by Nature’ Breaks All the Rules

Tripleslash Studios, with their inaugural game “Magnetic By Nature,” is breaking all the rules when it comes to art and physics in video-game design. “The market is saturated by many of the same game concepts,” said Kyle Chittenden, a graduate student in the EAE program and game artist. “As an indie studio, we push innovation to broaden the entire game industry and to produce games that are new and fresh.” In the game, players can propel their automaton through colorful, art-deco-inspired environments using the magnetic fields from different types of magnets to avoid dangers and advance through the levels. Developed by a team of six artists and four programmers, “Magnetic by Nature” is equal parts visual treat and mechanics masterpiece.

‘Avatar Trials’ Surpasses 60,000 Downloads

In its first year, “Avatar Trials: Ninja Uprising” surpassed 60,000 downloads and 10,000 units sold. The game broke into the top 250 games of all time in the Xbox Indie market — making it one of the most successful Xbox games to ever come out of the EAE program. While these achievements would be impressive for any experienced game designers, the students behind “Avatar Trials” were all undergraduates. “We were all really surprised to see the game do so well,” said Ross Marabella, a senior in the EAE program and team lead for “Avatar Trials.” To be competitive in the industry, Marabella knew it would take more than just great art and programming skills. “I put a lot of work into marketing, social media and search engine optimization to get the word out about the game,” he said.
Be a trendsetter.

“Figuratively Foreign” (above) by student Elise Ranzenberger aims to understand German contemporary artists’ unique connection to German society while including Ranzenberger’s perspective of German identity.

“Transformed into Omnipresence” (right) created by student Jake McIntire explores the dichotomy and coexistence of absence and presence.

Students in the College of Fine Arts already push the boundaries of what’s possible, but they are challenging themselves to do even more through a new program called ArtsForce. This two-day conference organized by and for students was the response to a student survey that showed an overwhelming desire to supplement the education about their art with experiences and information to directly prepare them to enter the workforce.

Through workshops, nationally renowned speakers, panels and networking opportunities, ArtsForce sheds light on the professional skills these students are already developing — transferable skills like creative thinking and problem-solving — and helped them create connections in the community and complete practical tasks like building a portfolio. The first-ever ArtsForce conference was held in November 2013, and the impact on the students was profoundly positive.

“Students who participated in the conference walked away with a better understanding of the value of their arts degrees,” said Trevor Myrick, a double major in art history and mathematics, who helped organize the inaugural event.
Lindsey Wright, a doctoral student in piano performance at the U, is making learning the piano easy and affordable for elementary school students in Utah. Wright observed that Utah schools were cutting the funding for music programs. In response, Wright created U-Play Piano, an online computer-based piano curriculum that is much more affordable and engaging to kids.

“It pains me to think of a world without music education,” Wright said.

By using electronic keyboards and this online piano curriculum, U-Play Piano has alleviated the financial strain that hiring a personal piano teacher can have on parents and school districts.

“The real excitement for me is seeing how an art form that has been around for hundreds of years can change in such a dramatic fashion,” said Jared Pierce, the composer for the U-Play Piano program and another doctoral student in piano performance.

The beta version of U-Play Piano has been implemented in three Title I schools in Utah, and it has already seen results. Not only are the kids involved in the program making great strides in learning to play piano, but they have also been documented having improved test scores and increased school attendance.
Students Launch LEGO Mentor Program

Derek Jewell, a biomedical engineering major at the U, and Courtney Doyle, a Ph.D. student in mechanical engineering, are proving that LEGOs are for people of any age. They joined forces with the Lassonde Entrepreneur Institute, Utah’s operational partner for FIRST LEGO League, to start a mentor program. FIRST LEGO League teams consist of kids ages 9-14 who work together for four months to build robots that can maneuver through obstacles during a competition. While all of the teams have the interest and drive, not all have a coach with engineering knowledge. This is where the two Utah students jumped in and created the mentor program, recruiting 14 mentors in their first year. “I feed off the energy of these kids, and they inspire me to be a better engineer,” Doyle said.

Helping Women Enter Politics

While some students are struggling to keep up their grades and social life, Kendahl Melvin is a track and field star, full-time student, Associated Students senior class president, and a major advocate for women in politics. A major in political science and international studies, Melvin has seen that while half of the Utah population is women, not enough women serve in state government. After working in the Hinckley Institute for several years and doing an international internship with the European parliament, Melvin created the first university partnership with Real Women Run to encourage more women to enter politics.
Research Projects at the U Have Potential for Global Impact.

Being a top-level research institution, the University of Utah has countless ways for students to get involved with research. Some work on faculty projects; others venture out on their own. Here are some of the students making an impact with their research.

Beau Freckleton developed landing gear that mimics birds.

**Perching Helicopters**

Small helicopters propelled by four rotors are used to collect data for agriculture and military uses. But they lack the battery power for continuous flight. Beau Freckleton, a student majoring in mechanical engineering, has been working on that problem for almost three years. He is creating a way helicopters can perch like birds, so they can recharge using solar energy and complete data collection in less time. Freckleton used a 3-D printer to create prototypes for the helicopter. He created landing gear that is light enough for the helicopter to carry and sturdy enough to support the weight.

**Distraction-Free Driving**

Are certain tasks more distracting than others while driving? For three years, James Coleman, a graduate student in psychology, has been working with professor David Strayer to identify types of distracted driving. Measuring physiological and subjective levels, Coleman created a rating scale. He is currently using his results to meet with advocacy groups who have lost family and friends due to distracted driving and hopes to continue promoting distraction-free driving.

Driving simulation technology helps researchers study safety.
Testing Materials in Extreme Conditions

When Anne Schaeffer, a Ph.D. candidate in physics, wanted to study the properties of materials, specifically superconductors, under extreme conditions, she realized that she wouldn’t know the true effects unless they were tested concurrently. Her solution: create a method herself. With grant support, she created a pressure chamber that tested two different samples of a superconductor simultaneously. Comparing the samples allows scientists to spot the smallest differences among materials. Her new method has inspired her to continue studying the effects on lithium and how they change at low temperatures and high pressure.

Weaving History into Building Design

When a class project asked students to design a library in Arizona, Caitlin Thissen, a recent architecture graduate, wanted to not only design a usable library but one that embraced the community’s traditions. Thissen used the traditions of the Hohokam tribe, who settled in northern Arizona, as a precedent for developing a building system and program for the library. She intertwined the history and traditional design into the contemporary design. “It’s important to consider materials and their meaning as it evolves over time in relationship to location and their use in design and construction,” Thissen said.

Parasite Killer

What began as a basic science research project for Aude Peden evolved to a much more complex study to help people. Peden, a post-doctoral fellow with the department of biology, came to the U to identify new genes that regulate the nervous system using genetic screens and small roundworms as a modal system. Peden’s project revealed a natural byproduct that kills parasitic worms in sheep. Peden’s background is part of what drives her. She grew up in the western African nation of Gabon, where nematode worms affect everything from livestock to people.
Social Work Students Take on Criminal Mental Health

According to the U.S. Bureau of Justice Statistics, 64 percent of inmates showed symptoms of a mental health disorder in 2006. Upon release, many of these men and women were left without medication, food, housing and support.

University of Utah master of social work graduates Rebecca Brown and Lynn Unger are using their experience in the U’s forensic social work program to provide hope and support for these men and women.

“It is really sad when you see someone who is mentally ill go into a store and take a bag of chips and just wait to get arrested without even opening the bag,” said Unger, who is now employed by Salt Lake County. “It’s because they know they get medication in jail, they get three meals a day, and they have a roof over their head.”

In August 2012, Brown founded the Alternatives to Incarceration (ATI) Transportation program to combat this cycle of recidivism by linking recently released mentally ill prisoners with the resources they need to begin building a new life.

ATI Transportation provides mentally ill clients with a ride from the jail to mental-health resources — a simple concept that has yielded big results. This past year ATI Transportation provided 232 clients with rides to mental health resources, 89 percent of which attached to services within 30 days.

The program required a considerable amount of vision and dedication on the part of Brown and Unger — work that included rewriting a judicial order and creating a new position to bridge the gap between legal and mental health services.

“We are able to pick up their medications immediately, get them to the pharmacy on site, and, if they need it, start assisting them with case management or housing,” said Brown, program founder and director of Adult Services for Valley Behavioral Health. “It’s an immediate link and access to services, which in the past has been something that is difficult and becomes more difficult the longer a client is off their medications and back on the street.”
PROGRAM DIRECTORY

**ArTsBridge**: An interdisciplinary arts education outreach program .......... www.artsbridge.utah.edu.

**ArTsForCe**: A two-day conference for art students to learn about how to get prepared for professional work .......... www.artsforceutah.com.

**Bench-2-Bedside**: A competitive opportunity for medical, engineering and business students to collaborate to develop or improve a medical device .......... cmi.uofuhealthsciences.org.

**Biodesign**: Teams of engineering students work with clinicians to develop prototypes and test medical devices .......... www.biodesign.utah.edu.

**Bioinnovate**: Graduate program providing a comprehensive biomedical, device-design training program .......... www.bioinnovate.utah.edu.

**Bioworld**: A two-semester course enabling students to develop a business plan for a medical-device venture in a developing country .......... www.bioworld.utah.edu.


**DesignBuildBluff**: A year-long program for graduate students in architecture who design and build homes in southern Utah .......... www.designbuildbluff.org.

**Entertainment Arts & Engineering**: Interdisciplinary program where students design and develop video games .......... www.eae.utah.edu.


**Entrepreneur Club**: A student-run organization that provides programs and networking opportunities for students interested in entrepreneurship .......... www.uofueclub.com.

**Foundry Utah**: An experience-based educational community where entrepreneurs can start acting on their business ideas and access resources to help them along the way .......... www.foundry.utah.edu.

**Games4Health**: Develop a health-related video game or app, design the business model and outline the clinical trial strategy, and compete for prize money .......... g4h.business.utah.edu.

**Get Seeded**: Pitch your business idea to the student Entrepreneur Club to receive seed funding for your new venture .......... www.uofueclub.com.

**Global Health Initiative**: Promotes health and medical development leading to measurable improvements .......... www.globalhealth.utah.edu.

**Global Health Scholars**: Students get exposed to a variety of perspectives on global health practices .......... http://bit.ly/ZptZ6O.

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Create your own innovative experience. Here are some U programs to get started.

Did we miss something in the listing below? Contact us at 801-587-3836 or lassonde@utah.edu to be included in the next edition.
**HINCKLEY INTERNSHIP PROGRAMS:** Internship opportunities are available to students interested in politics. [www.hinckley.utah.edu](http://www.hinckley.utah.edu).

**HONORS PRAXIS:** Students work together to find original solutions to problems our society faces, while a faculty mentor guides the work of each group. [www.honors.utah.edu](http://www.honors.utah.edu).

**INNOVATION SCHOLAR:** Students learn how to solve problems that inspire them by engaging in interesting classes, volunteering, personal passions and more. [www.innovation.utah.edu](http://www.innovation.utah.edu).

**INTERNATIONAL EXCHANGE/STUDY ABROAD:** Students participate in hundreds of programs all over the world based on their interests and career goals. [www.learningabroad.utah.edu](http://www.learningabroad.utah.edu).

**INTERNATIONAL LEADERSHIP ACADEMY:** Students examine global leadership in business, government, and non-profit organizations. Community mentors assigned. Email [lehman@poli-sci.utah.edu](mailto:lehman@poli-sci.utah.edu).

**JAMES LEE SORENSON GLOBAL IMPACT INVESTING CENTER:** Provides in-depth experience tackling global issues by investing into innovative startups dedicated to solving social and environmental problems. [www.sgiicenter.com](http://www.sgiicenter.com).

**LASSONDE NEW VENTURE DEVELOPMENT:** Graduate students are paired with a faculty inventor and spend a year preparing a business plan. [www.lassonde.utah.edu](http://www.lassonde.utah.edu).

**LASSONDE SOCIAL ENTREPRENEUR PROGRAM:** Put your business skills to work solving critical social issues, and travel the world. [www.lassonde.utah.edu](http://www.lassonde.utah.edu).


**MY UNIVERSITY RESEARCH EXPERIENCE (MURE):** Find research opportunities offered by faculty from different departments across campus. [mure.utah.edu/opportunities](http://mure.utah.edu/opportunities).

**MY U SIGNATURE EXPERIENCE (MUSE):** A database of research, leadership, community engagement, scholarships and internship opportunities across campus. [www.muse.utah.edu](http://www.muse.utah.edu).

**NUTRITION LABORATORIES:** Lab experience in areas including nutrition biochemistry, experimental foods and nutrition physical assessment. [www.health.utah.edu/nutrition/laboratories](http://www.health.utah.edu/nutrition/laboratories).

**OPPORTUNITY QUEST:** A business plan competition for students across the state, addressing the executive summary stage of business development. [www.ues.utah.edu/oq](http://www.ues.utah.edu/oq).

**ROBOUTES:** Students interested in robotics participate in competitions. [www.roboutes.utah.edu](http://www.roboutes.utah.edu).

**SORENSON CENTER FOR DISCOVERY AND INNOVATION:** Helps unleash the creative genius within the U and the community to innovate the way we live, work and play. [http://bit.ly/1m2mDxQ](http://bit.ly/1m2mDxQ).

**SPARK:** An online community all about ideas - inspiring students to collect, sort and finally implement them. [www.spark.utah.edu](http://www.spark.utah.edu).

**SUSTAINABILITY SCHOLARS:** Students work across disciplines to research, imagine, create and implement strategies that will positively affect sustainability practices at the U. [www.honors.utah.edu](http://www.honors.utah.edu).

**SUSTAINABLE CAMPUS INITIATIVE FUND PROGRAM (SCIF):** Innovative and motivated students are awarded grants to team up with a faculty or staff member to bring about sustainable changes to the campus. [http://bit.ly/1gC9QG](http://bit.ly/1gC9QG).

**TECHTITANS:** Students receive instruction in the idea-to-development process and compete with their peers for the best idea. [www.ues.utah.edu/techtitans](http://www.ues.utah.edu/techtitans).

**UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAM (UROP):** Students are paired with faculty members and work closely with them in research experiences. [www.urop.utah.edu](http://www.urop.utah.edu).

**UNIVERSITY VENTURE FUND:** Students work with entrepreneurs and investors to learn about investments and see how successful companies are managed. [www.uventurefund.com](http://www.uventurefund.com).

**UTAH ENTREPRENEUR CHALLENGE:** One of the largest business plan competitions in the nation. Students across Utah develop full, comprehensive business plans. [www.ues.utah.edu/uec](http://www.ues.utah.edu/uec).

**UTAH FIRST LEGO LEAGUE:** Kids solve real-world challenges by building LEGO-based robots to complete tasks on a thematic playing surface. Many volunteer opportunities available. [www.utfll.utah.edu](http://www.utfll.utah.edu).

**UTAH REAL ESTATE CHALLENGE:** Real estate development competition for undergraduate and graduate students throughout Utah. [http://bit.ly/1mDzDOi](http://bit.ly/1mDzDOi).

**UTE WEATHER CENTER:** An experiential learning opportunity for students interested in atmospheric sciences. [www.atmos.utah.edu/ute-weather](http://www.atmos.utah.edu/ute-weather).
Go Utes!