2024-25

INNOVATION & ENTREPRENEURSHIP IMPACT REPORT

How CU is fueling innovation and collaboration
from the classroom to the community

University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus

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Introduction

Talent, Tools, and Traction, CU Powers the Innovation Pipeline

Todd Saliman, CU President

When discoveries move from bench to business and bedside they expand knowledge, save lives, launch careers, and power communities. At CU, that impact shows up in many forms, like the journey of graduate student Sristy Agrawal. She didn't have a business background, but in Svenja Knappe's quantum sensor lab at CU Boulder, she saw the potential to turn breakthrough research into real-world impact. With support from Venture Partners at CU Boulder through programs like NSF I-Corps, Lab Venture Challenge, and the New Venture Launch course at the Deming Center, she built a business model, secured early non-dilutive funding, and launched Mesa Quantum. Mesa addresses vulnerabilities in the U.S. GPS system by developing next--generation positioning, navigation, and timing technologies, and has now raised over $3.7 million. Meanwhile, after a bad fall on his skateboard, University of Colorado at Colorado Springs (UCCS) undergraduate Nicholas Ramirez asked a simple question, what if skateboards could be safer? Backed by the UCCS Bachelor of Innovation program and late-night work at The Garage, he developed a prototype, built a company, filed a patent, and found his community. His startup, Wobbleless, is not just about safer hardware, it's a testament to what happens when universities invest in student ambition and creativity.

Student Stories

"It was the professors, The Garage, the Bachelor of Innovation - without them, I wouldn't be here. I would've never even started."
- Nicholas Ramirez, UCCS Undergraduate

Introduction

Sparking Ambitions, Illuminating Paths

These are just two examples of the power of the innovation engine of the University of Colorado, a four-campus system powered by talent, research, and an infrastructure designed to move bold ideas into the world.

Last year, CU's four campuses collectively secured $1.7 billion in sponsored research funding and philanthropic support, the eighth consecutive year above the billion-dollar mark. That capital turns curiosity into results.

This work is interdisciplinary by design, drawing strength from faculty, students, industries, and public-private partnerships that together transform possibility into progress. At a moment defined by geopolitical tension, public-health urgency, and breakthrough technologies from AI to quantum, CU is leaning into the challenge with new tools and new collaborations to build what comes next, together.

Innovation

CU has launched 333+ IP-based startups and countless more through campus entrepreneurship programs.

Economic Impact

Contributed $19.4 billion in economic impact to the state of Colorado.

Health

Delivered 2.6M+ patient visits with cutting-edge care in 2024.

Education

Since FY2022 20,250 students earned 104,029 credits enrolling in innovation and entrepreneurship courses systemwide, supported by 80+ programs.

Students coworking

Introducing the I&E Initiative

In the CU innovation and entrepreneurship ecosystem, every campus makes a unique contribution. The President's Innovation and Entrepreneurship Initiative provides a collaborative bridge across the four campuses, empowering students, staff, and faculty to drive economic and social transformations.

Using a grassroots approach, the initiative has engaged over 150 individuals - students, faculty, and staff - and collaborated with systemwide leaders to understand unique campus strengths, improve systems of support, and celebrate the impact of campus initiatives.

Mike Lightner, VP Academic Affairs, CU System

2024 Showcase

Areas of impact

Under the leadership of President Todd Saliman, the CU Innovation and Entrepreneurship Initiative focuses on three key impact areas:

- Ecosystem - Foster collaborative research, supporting commercialization, and enhancing campus innovation.
- Education - Ensure every student has the opportunity to engage with innovation and entrepreneurship through courses, degree and certificate programs, research, or experiential opportunities.
- Societal Change - Empower faculty, students, and staff to be a part of the groundbreaking innovations and ventures emerging from CU's innovation and entrepreneurship ecosystem.

Impact Snapshot

Education, Technology Translation, and Game-changing Collaboration

Impact: Education in the 24/25 Academic Year

Across CU's four campuses, students engage in innovation and entrepreneurship education that aligns with high-impact, project-based learning, which improves graduation rates and boosts early career earnings, especially for students from underrepresented and economically disadvantaged backgrounds*. Examples include standout programs like:

- UCCS's one-of-a-kind Bachelor of Innovation degree;
- CU Denver's statewide-exclusive Masters in Entrepreneurship degree;
- Cutting-edge translational programs at CU Anschutz through the Colorado Clinical and Translational Sciences Institute (CCTSI) and CU Innovations, and;
- CU Boulder's nationally recognized offerings via the Deming Center for Entrepreneurship or the first-of-its-kind Entrepreneurship Center for Music.

Each of these programs is embedded in a broader continuum of resources across their campuses that scaffold learning and reduce risk for aspiring founders.

6,765
Students Enrolled in Innovation & Entrepreneurship Courses

30K
Innovation & Entrepreneurship Credit Hours taken

198
Innovation & Entrepreneurship Courses Offered

80+
Innovation & Entrepreneurship Programs offered

*Learn more in appendix + see citations

2025 CU Denver Climb Competition Winners

I&E Impact Snapshot

Translating Ideas to Action

Since 1994, CU's commercialization arms, Venture Partners at CU Boulder and CU Innovations at the University of Colorado Anschutz Medical Campus have worked with university innovators and industry to translate CU technologies and discoveries into new businesses and partnerships. These two organizations have catalyzed CU innovators with impressive results:

333
Startups launched through CU's commercialization arms

6,786
Inventions disclosed

$21.5B
Capital funding raised by startups

2,007
Licensing deals

11,194
Patents filed

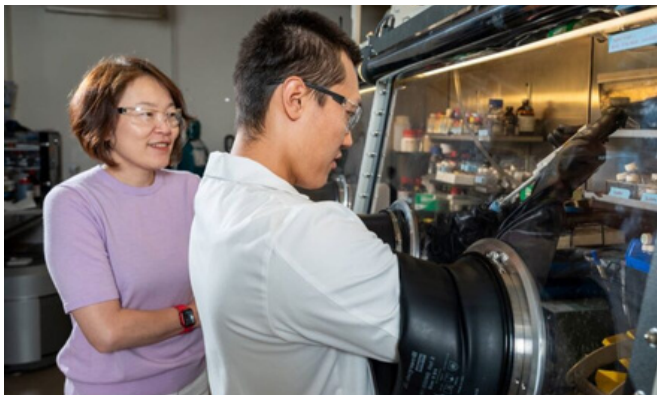
$395.8M
Gross revenue

CU's commercialization arms deliver real economic value: CU Innovations added $3.73 billion to the U.S. economy in 2023, while Venture Partners generated $8 billion between FY 2018 - 2022 through the commercialization of CU intellectual property.

About our Commercialization Arm

CU Innovations at Anschutz Medical Campus

CU Innovations specializes in commercializing technology, developing ventures, and building business partnerships that transform healthcare and improve patients lives. Located on the CU Anschutz Medical Campus, they are the go-to resource for biomedical technology commercialization. They are listed among the “Top 20 in the World for Tech Transfer” and named a “Top 5 Innovation Hub” by the National Institutes of Health (NIH). Their robust support ecosystem includes intellectual property services, venture development resources, and strategic funding initiatives. Through programs like SPARK, which provides up to $200,000 and expert guidance to advance novel therapeutics, diagnostics, and medical devices, CU Innovations empowers faculty to navigate the business of health science. New initiatives like the Healthcare Innovation & Entrepreneurship (HIE) Initiative and funding mechanisms such as the CU Healthcare Innovation Fund enable life saving discoveries to scale.

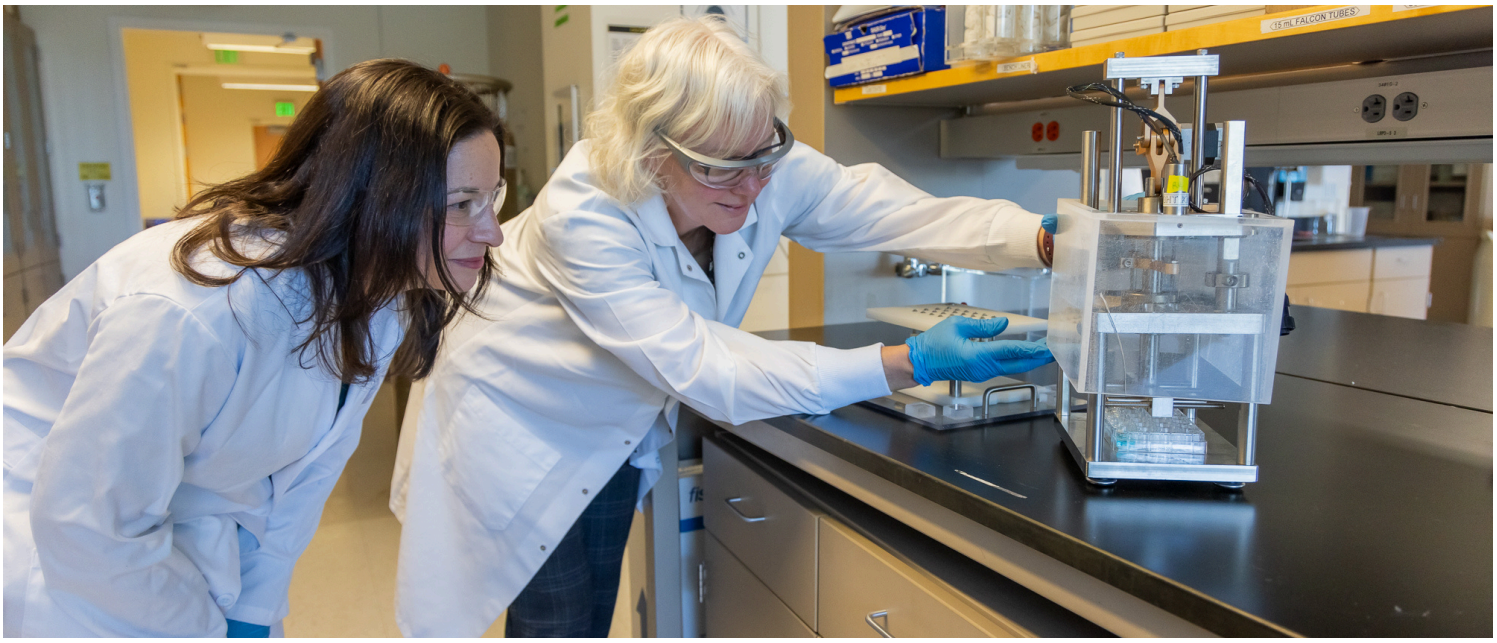


Venture Partners at CU Boulder

Venture Partners at CU Boulder serves as the commercialization engine for CU Boulder, UCCS, and CU Denver (excluding biosciences), translating research into impact at a national scale. A 2021 winner of the Economic Prosperity Innovation Award, it supports innovators through a deep bench of programs—from the Lab Venture Challenge, which awards over $1 million annually in early-stage translational funding with support from the Colorado Office of Economic Development, to the NSF I-Corps™ Hub West, a multi-institutional initiative training researchers in customer discovery and product-market fit. Venture Partners also created Embark Deep Tech Startup Creator, a program that pairs entrepreneurs with CU Boulder technologies ready to spin out. This robust ecosystem helped launch a record-breaking 35 startups in FY 2024—second only to Stanford. Through Buff Gold Ventures, an affiliated fund, and the Destination Startup investor showcase, Venture Partners connects these startups to capital and community across the Intermountain West.

Collaboration Fueling Innovation

It is through campus and community investment and diligent effort that campuses are able to create innovative and transformative collaborations resulting in game changing impact.



CU + CSU researchers (AB Nexus) are advancing osteoarthritis treatments. Stephanie Bryant (right) in lab.

AB Nexus is CU's cross-campus catalyst that links CU Boulder and CU Anschutz researchers through seed funding and hands-on support for collaborative work. Since launching in 2020:

- $4.95M distributed to 59 joint Boulder-Anschutz teams that are improving human health and well-being (More HERE).
- AB Nexus seed grants fuels groundbreaking multi-campus partnerships. One of those teams went on to secure millions in ARPA-H funding to pioneer regenerative, noninvasive osteoarthritis treatments (More HERE).

"AB Nexus has created a new culture of research collaboration at the University of Colorado...Solving the toughest challenges in human health requires teamwork across a wide range of fields, and we're very proud of how this program has helped to inspire so many new interdisciplinary research projects across our campuses."

-Thomas Flaig, MD, Vice Chancellor for Research at CU Anschutz

Collaboration Fueling Innovation

Federal Catalysts to Fuel Collaboration

CU channels federal funding to unite regional partners, drive transformative solutions, and inject hundreds of millions into Colorado's economy, just a few examples include:

- CU Boulder and CU Denver are core partners in the $160M funded NSF Advanced Sensing and Computation for Environmental Decision-making (ASCEND) Engine in Colorado and Wyoming, a 10-year effort advancing environmental monitoring and decision-making in areas like wildfire mitigation, water management, and air quality (More HERE).

CU Boulder engineering students and OSU's Erica Fischer survey a Marshall Fire site as part of ASCEND's structural impact study.

- Elevate Quantum Tech Hub. As co-leader of Elevate Quantum, CU Boulder is helping drive a $127 million federal–state investment aimed at catalyzing over $2 billion in private capital and establishing the Mountain West as a global quantum leader. CU Denver, UCCS, and CU Anschutz also play vital roles advancing quantum research and contributing to the region's growing quantum workforce. (More HERE).

CU Boulder and NIST leadership and students gather for the opening of the Quantum Engineering Initiative (QEI) Lab space. Video

- Up to $46M from an ARPA-H award aimed at curing blindness. A CU Anschutz team led by surgeon-scientist Kia Washington aims to restore vision via whole-eye transplantation. This is just one of CU's ARPA-H awards (More HERE).

Press Conference with Kia Washington, MD, principal investigator of the THEIA project,

Seeding Innovation Ecosystems

Collaborations in the Community

CU has built one of the nation's most prolific commercialization engines. The National Academy of Inventors (NAI) has ranked the CU system 18th among the "Top 100" institutions nationwide for recent patent activity. From Nobel prize-winning discoveries in quantum physics and RNA chemistry to cutting-edge robotics and solid-state batteries, CU research launches ventures that reshape entire industries and catch the eye of global acquirers.

Many of these innovations stem from NAI Fellows, over 20 CU faculty across all campuses, recognized for inventions that improve lives, drive economic growth, and advance society.

CU celebrates its NAI inventors including:

- Xuedong Liu, Professor, Biochemistry, University of Colorado Boulder. Innovation in therapeutics and drug delivery.
- Zoya (Zorana) Popovic, Distinguished Professor Lockheed Martin Endowed Chair in RF Engineering, University of Colorado Boulder . Innovation in radio and microwave engineering.
- Richard Noble, Research Professor, Chemistry, University of Colorado Boulder. Innovation in novel membrane and thin film development.
- Theodore Randolph, Gillespie Professor, Center for Pharmaceutical Biotechnology, Co-Director Chemical and Biological Engineering, University of Colorado Boulder. Innovation in protein stabilization and lyophilization for enzymatic catalysis, particle formation, and drug discovery.
- Henry Kapteyn, Professor, Fellow, JILA, Physics at the University of Colorado Boulder. Innovation in ultrafast optical science.
- Margaret Murnane, Distinguished Professor, Fellow - JILA, Physics, University of Colorado Boulder. Innovations in Ultrafast optical science.
- Robert Hodges, Professor Emeritus, School of Medicine, University of Colorado Anschutz. Innovations in peptide synthesis.
- Jason Burdick, Bowman Endowed Professor, Chemical and Biological Engineering University of Colorado Boulder. Innovations in polymeric biomaterials for tissue engineering and drug delivery.

See full list and details of applications: HERE

Seeding Innovation Ecosystems

CU Ventures That Changed the Game

CU's first spinout, launched in 1956 after a CU Boulder rocket breakthrough caught the attention of visiting Ball executives. Co-founded with physicist David Stacey, the company went on to power missions like the James Webb Space Telescope, employ 500+ CU alumni, and become one of Colorado's largest tech exits with its acquisition by BAE (More here). That early partnership helped seed Colorado's deep tech ecosystem, now spanning RNA therapies, robotics, precision oncology, and clean energy (More here). The table below highlights notable CU spin-outs (or CU-originated ventures) that reached the finish line either through IPO or exit.

Select 2024 CU Spin-outs

Company	Description	Outcome
Ball Corp (BALL)(Ball Aerospace division)	Ball Aerospace sold to BAE in 2024 for $5.6 B, one of Colorado's biggest exits.	Acquisition/IPO
LiteWave Technologies	Emerged from the lab of Jeffrey Thayer, professor emeritus and research professor in the Ann and H.J. Smead Aerospace Engineering Sciences. CU Boulder LiDAR pioneer that shrank ocean-mapping sensors from van-sized rigs to drone payloads; snapped up in 2024 by government-tech contractor Arcfield, underscoring CU's deep-tech pipeline.	Acquisition
OnKure Therapeutics (OKUR)	Co-founded by CU Boulder biochemist Prof. Xuedong Liu; lead PI3Kα inhibitor OKI-219 and follow-on assets were co-developed with the CU Cancer Center now 15 CU alumni are now on staff.	IPO
Q32 Bio (QTTB)	A CU Healthcare Innovation Fund–backed immunology startup, founded through a collaboration between Michael Holers, MD, and Joshua Thurman, MD, of the CU School of Medicine, and Stephen Tomlinson, PhD, of the Medical University of South Carolina, is now a publicly traded company.	IPO

See the full list and more details Appendix A

Across aerospace, life science, robotics, and clean-tech, CU ventures have translated research into at least $33 billion+ in disclosed exit value, reinforcing the university's reputation as a launchpad for high-impact companies.

CU Anschutz Medical Campus

Innovation at the Edge

"It's such a collaborative campus. The most valuable thing for me is partnering with other labs...But there's so many opportunities. For example, iCERch plugged me into a network of industry professionals."

— Bridget Hoag, Graduate Student, Cancer Biology Program

Innovation at the Edge

CU Anschutz is, in Vik Bebarta's, MD, CU Anschutz Professor and Founding Director of the CU Center for COMBAT Research words, "driving innovation at the edge." As a world-class medical destination at the forefront of transformative science, medicine, education, and patient care, the campus logged 2.6 million patient visits last year and garnered a record $756 million in sponsored research funding (FY 24). The campus is also listed among the "Top 20 in the World for Tech Transfer", named a "Top 5 Innovation Hub" by the NIH and Ranked "#4 by Nature's Innovation Index". But statistics don't tell the story of the momentum you feel the moment you step onto the gleaming state-of-the-art campus.

- As a Tier 1 Research Institution, CU Anschutz has published an average of over 3,000 papers a year for the past five years (PubMed), with over 3,500 clinical trials underway with 14,000+ enrollees (more HERE).

- CU Innovations:
  - Logged 1,549 invention disclosures, 2,679 patents, 335 licenses and more than $1.2B in startup financing.

  - CU Innovations also co-manages the $100 million CU Healthcare Innovation Fund, which invests in spin-outs and external companies that can road-test tech on campus.

  - Additionally, they launched the Healthcare Innovation & Entrepreneurship (HIE) Initiative to give every scientist the tools, funding, and mentorship needed to move discoveries from lab bench to bedside. Co-designed with faculty, students, and mentors, HIE provides tailored guidance and centralized support—empowering campus innovators to navigate commercialization with confidence. Backed by top leadership and broad campus support, HIE is a strategic investment in CU Anschutz's future as a national hub for healthcare innovation. Read more about HIE Impact and get engaged.

Innovation at the Edge

Continued...

- CU Anschutz also convenes collaborative support and resources, like Colorado Clinical and Translation Institute (CCTSI) deploys $3 million each year in pilot and micro-grants, then runs I-Corps@CCTSI to turn awardees into customer-discovery pros.
    - Twistomy™, a continent ostomy device born from a bioengineering capstone project in partnership with a Children's Hospital surgeon, won the 2025 American Gastroenterological Association "Shark Tank" competition.
- The CU Anschutz campus boasts over 800K square feet of state-of-the-art laboratory space, two nationally ranked independent hospitals and unique spaces like the Gates Biomanufacturing Facility (GBF), which is one of six combined cell therapy and protein manufacturing facilities in the United States. Unique campus programs help to foster innovations that are transforming healthcare and the practice of medicine.
- Fitzsimons Innovation Community, helps incubate early stage companies with five buildings, 427K square feet of turnkey lab/office space, houses 80+ companies that have raised >$116 million in the last three years for.

Twistomy and its co-founders Devon Horton and Lily Williams

Educational Foundations

At CU Anschutz, six health professional schools and more than 40 graduate programs equip scientists and clinicians to identify real-world health problems and build practical solutions, supported by a range of co-curricular opportunities and mentorship. Every breakthrough here starts with people in training...

Climate & Health Program Education

Students in healthcare lecture

Educational Foundations

Programs across disciplines

- iCERch, a semester-long cohort, walks postdocs through strengths mapping and career design so they can spot market gaps as easily as microscope artifacts.
- The Health Innovation Scholars Program (HISP) drops first-year med-students into a four-week, paid design-thinking sprint; many emerge with prototypes instead of case reports.
- Space Medicine, one of the nation's few joint Medicine × Aerospace tracks, preps residents to practice "off-planet." Faculty lead Arian Anderson, MD just briefed NASA on autonomous care for Mars crews.
- Climate & Health Program, first ever established in the country, equips health professionals and researchers to address the health impacts of climate change through interdisciplinary education, research, and community engagement.
- A Bio-innovation & Entrepreneurship Certificate (co-listed with the CU Denver Business School) teaches cap tables alongside cell culture.
- Micro-I-Corps and SPARK Bootcamps compress IP, FDA, reimbursement, and market sizing into caffeine-fueled crash courses.
- The Clinical Science MS/PhD trains busy clinicians in translational methods, biostats, and ethics so they can flip bedside puzzles into funded trials.
- Finally, the Academia-Industry Alliance (AIA) keeps the pipeline warm with monthly Brews & Biotech happy hours and the Rocky Mountain Biotechnology Symposium.

Cathy Bodine Lecturing


Space medicine training

Student Stories

Bridget Hoag

Cancer Biology PhD Student and AIA President, using gene editing to uncover how aging drives blood cancer. From the lab to biotech to middle school classrooms, she's building a future where science cures disease, connects communities, and inspires others.

(Read more)

Lily Elizabeth Feldman

PhD candidate in Pharmacology and Molecular Medicine at the CU Anschutz Medical Campus, is redefining how we fight chemotherapy resistance and moving lab discoveries into patient care.

(Read more)

Ian Shelton

PhD candidate in Pharmacology at the CU Anschutz Medical Campus, turned frustration around patient experience into a company that reimagines cancer treatment.

(Read more)

Moonshots Already in Flight

At CU Anschutz, research moves fast from lab bench to life-changing impact, thanks to a support system built to deliver breakthroughs.

- Self-healing joints – Michael Zuscik, PhD, and Karin Payne, PhD, landed AB Nexus funding to coax cartilage to regenerate rather than scar (More HERE).
- Living Lab AgeTech – Researchers set up smart-home test beds inside retirement communities so older adults can trial mobility devices at home, not in a mock clinic (More HERE).
- AI diagnostics – Jayashree Kalpathy-Cramer, PhD trains computer-vision models that flag cervical cancer and infant eye disease on low-cost phones—a boon for low-resource clinics (More HERE).
- Synthetic-blood kidney perfusion – Heiko Yang, MD, PhD keeps donor kidneys viable longer with a custom ex-vivo circuit (More HERE).
- Cleaner air for kids – Epidemiologist Thomas Jaenisch, MD, PhD is leading research to redesign classroom ventilation to improve indoor air quality (More HERE).
- Colorado Chest Tube – Jessica Rove, MD, built a lidocaine-infused drain that slashes pain and opioid use after heart surgery (More HERE).

Welle Lab

From Idea to IPO: The Commercial Engine

To accelerate projects through key translational milestones, initiatives like the Anschutz Acceleration Initiative injects slices of a $50 million gift to get them back on pace for first-in-human trials. Meanwhile, CU Innovations runs a robust range of programs like SPARK, which has already spun out 27 companies and pumped $7.5 million into 50 early projects.

- RefinedScience combines high-fidelity data with cutting-edge science and technology and world-class expertise to inform smarter drug discovery and development. Their transformative insights identify and validate novel drug targets, design smarter clinical trials, and forge paths for stalled clinical-stage drug candidates. RefinedScience is a joint collaboration between UCHealth and CU Anschutz, with support from CU Innovations, which results in the development of curated data suites for specific diseases. From this deep data analysis, scientists are able to design smarter clinical trials that can move previously stalled drugs through the clinical stage and on to the market where they can start helping patients. With their proprietary technology, millions of dollars and multiple years have been trimmed off the drug development process. These insights have already resulted in the acceleration of a therapeutic for acute myeloid leukemia and fueled the spinout of OncoVerity who has now completed their Series A funding.

- RheumaGen, CU Anschutz spin-out is rewriting the immune system: co-founded by gene-editing trailblazer Brian Freed, MD, the startup snips a single HLA “immune gene” glitch in patients’ own cells to halt rheumatoid arthritis and other autoimmune disorders, with first-in-human trials targeted for 2026.

- Born out of CU Innovations and now based at Fitzsimons Innovation Community, RefinedScience mines CU Anschutz’s rich clinical datasets to rescue stalled drugs and design smarter trials, accelerating life-saving therapies to patients.

- OncoPatch develops beta-emitting films that treat non-melanoma skin cancers in a dermatologist’s chair.

- HepQuant, led by hepatologist Greg Everson, MD, commercializes a non-invasive liver-function test now spotlighted at Digestive Disease Week 2025.

Learn more

RheumaGen Team

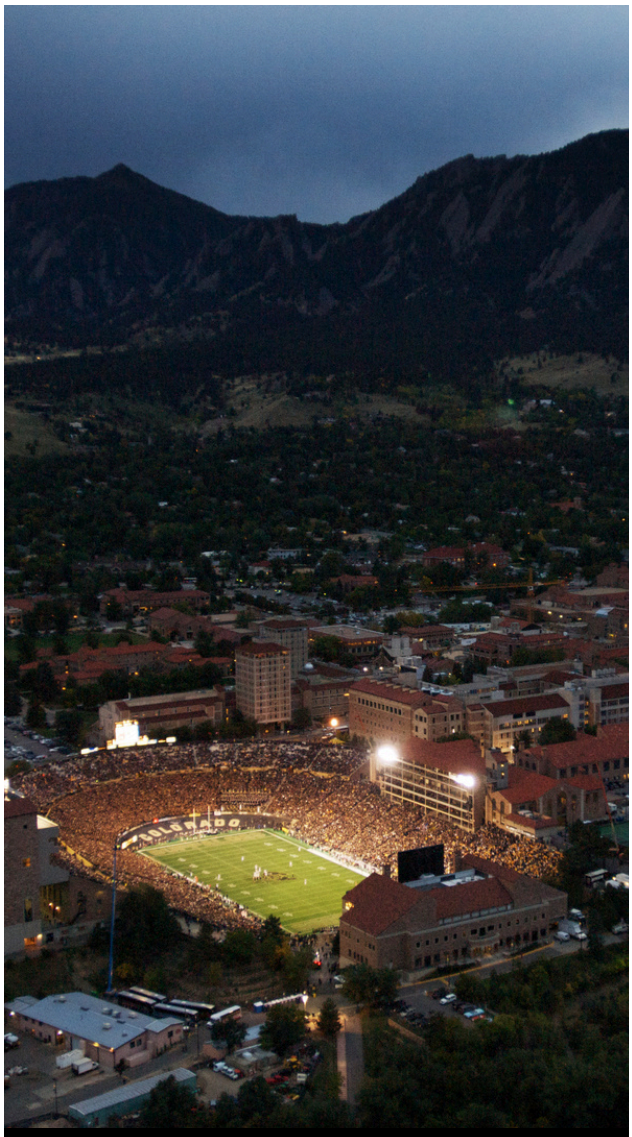
Linda Crnic Institute for Down syndrome

CU Boulder

Innovation Pathways from Idea to Impact

CU Boulder serves as a hub for innovation and entrepreneurship, creating real-world impact for students, faculty, staff, and the Colorado community. Anchored in a vibrant startup ecosystem, CU Boulder's ecosystem benefits from a collaborative "give first" ethos, a rich talent pool, and deep expertise from bioscience to quantum. CU Boulder maintains a deep commitment to supporting innovators from all backgrounds, which fuels the creativity and innovation needed to deliver real-world impact. Together, these assets turn research and new ideas into scalable impact.

Boulder's Ecosystem



CU Boulder ranked #1 nationally in FY 2024 for startups launched from university intellectual property, with 35

Second only to Stanford for the most in a single year.

$742 million in research (FY 2024)

More than double 2013 levels, underscoring a decade of steadily rising discovery power.

#1 U.S. public university for NASA research funding.

Driving flagship missions and anchoring Colorado's leading space-tech economy.

Quantum hub in full expansion.

A new incubator and upgraded lab space position Boulder at the forefront of next-generation sensing, computing, and communications.

Nation's top city for green start-ups

Programs such as Boulder Climate Ventures at Leeds, backed by Breakthrough Energy, funnel student talent into climate-tech companies.

1,000+ Teams have engaged with New Venture Challenge

Entrepreneurial programming and pitch competitions, to date. A launchpad for aspiring problem-solvers and creatives, NVC connects the CU Boulder campus with the Boulder community to develop and fund innovative ideas.

*Learn more State of Research, Annual Report, News Release, Investing in Sustainability)

Education, Talent, Incubation & Testbeds

Each year, students tap into CU Boulder's innovation ecosystem of 60+ programs, centers, and competitions designed to spark entrepreneurial thinking and tackle real world problems. The Innovation & Entrepreneurship Initiative connects students, staff, and faculty with programs, community partners, and mentors, turning ideas into action.

Flagship programs span disciplines: The Deming Center for Entrepreneurship equips hundreds of undergraduate and MBA students each year with core business skills. The Entrepreneurship Center for Music, the first in the country, empowers artists to build creative, sustainable careers. After more than 60 years on stage, the Colorado Shakespeare Festival found new ways to innovate, launching a touring program and book that brings live performances to grade schools across Colorado, using Shakespeare's plays to teach students about violence prevention and conflict resolution. Engineering students access cutting-edge courses, the Engineering Entrepreneurship Minor, and hands-on learning at the Idea Forge. The ATLAS Institute offers project-based degrees in Creative Technology and Design, helping students turn ideas into tangible prototypes.

Startup Summer + NVC Final Events

"Startup Summer was incredible. I learned a ton about the process of building a business and met lots of new people, ranging from industry experts (such as the CEO of Sphero) to college students from across the country—the people involved are what made Startup Summer truly special."

— Jackson Roberts, Startup Summer alum

Education, Talent, Incubation & Testbeds

CU Boulder also leads in building the next generation of socially-minded ventures. For example, Associate Professor Nathan Schneider, Director of the Media Economies Design Lab, is advancing cooperative business models that embed equity and ownership into digital platforms that are already influencing startups across Colorado through efforts like Start.coop.

To accelerate student-led ventures, Catalyze CU offers a summer-long accelerator for startups across the campus founded by students, faculty, and staff. Providing mentorship, funding, and co-working space, all without taking equity, Catalyze helps top campus innovators reach escape velocity. Past participants include startups, like PricingService.ai, an AI-powered hotel pricing platform, to Pastificio, a craft pasta company rooted in heirloom wheat and regenerative practices.

Programs like Startup Summer, hosted by the Silicon Flatirons Center, go even further, immersing students in Colorado's startup ecosystem through paid internships, hands-on venture creation, and mentorship from leading founders and investors.

Student Stories

Maithreyi Gopalakrishnan

Founder and CEO of PrecisionTerra

Launched through the Embark Deep Tech Startup Creator, tested in the NSF I-Corps Hub West, built on tech by Jade Morton (CU Boulder Ann and H.J. Smead Aerospace Engineering Sciences), now a venture-backed CU Boulder spinout improving GPS resilience in signal-challenged environments, previously worked in process engineering at Intel, led product at a quantum computing startup, and holds M.S./B.S. degrees in Engineering Physics from CU Boulder plus an M.S. in Management Science and Engineering from Stanford.

Jesus Soto

Junior, now acts as a scout investor for a venture capital firm and runs the startup club which has 500+ members.

Makenna Morc

Junior, now acts as a scout investor for a venture capital firm and runs the startup club which has 500+ members.

Maddie Freeman

Graduated from Leeds, made Forbes' 2025 30 Under 30 (Education) after founding a mental health platform after losing a friend to suicide.

Acceleration & Funding

CU Boulder surrounds founders with robust resources to launch and scale.

- Supporting Sustainability: During the 2024 Sustainability Hackathon, 197 participants developed and pitched 17 ventures for $10,000 in prizes. Throughout this week-long event, students, faculty and staff from across academic disciplines worked alongside experienced mentors to solve problems and build solutions to impact sustainability. For 2025, the event has gone statewide—rebranded as the Colorado Sustainability Challenge, it runs for two weeks and is open to all Colorado Front Range colleges and universities.

- Deming Center for Entrepreneurship - Beyond providing award winning entrepreneurship education to students, the Deming Center fosters global, regional, and rural impact. They empower students and communities through immersive Global Entrepreneurship programs in Africa, Europe, South America and Asia and by bringing entrepreneurship directly to rural Colorado through its Demystifying Entrepreneurship Rural Colorado Workshop Series.

- Catalyze CU has supported more than 100 student-led ventures since its founding, helping them secure millions in follow-on funding.

- New Venture Challenge The New Venture Challenge continues to draw hundreds of applications annually. In 2025, 104 teams pitched their ideas and vied for $325,000 in funding. Including specific tracks like:

    - High School NVC - Designed specifically for Colorado high school students in support of entrepreneurial learning, the High School New Venture Challenge (HSNVC)—powered by FirstBank attracted 180 participants who pitched 68 ventures for more than $25,000 in scholarship funding to apply towards future tuition at CU.

    - At the 2025 Women Founders New Venture Challenge, 28 women-led student and faculty startup ventures pitched their business ideas and vied for $20,000 in funding. The top team also secured a spot in the TiE U Colorado competition, designed to help fast-track collegiate entrepreneurs' innovative ideas into market-ready ventures.

Acceleration & Funding

- Two unique venture funds, Buff Gold Ventures and the student-led Deming Center Venture Fund, which trains students as next-generation investors while deploying capital into Colorado's innovation community. Meanwhile, Boulder Angels, launched in 2025 by CU alumni, connects Buff investors with top-tier CU and Colorado startups, with a vision to deploy millions annually while building a thriving mentorship community.

- Venture Partners advances ventures based on university intellectual property through a suite of programs supporting industry partnership, startup creation and funding opportunities. In 2024, it launched the Embark Deep Tech Startup Creator, pairing university inventions with experienced entrepreneurs to build new ventures. Other programs, like The Ascent Deep Tech Accelerator and the Lab Venture Challenge, enable researchers to translate discoveries into market-ready solutions. NSF I-Corps Hub empowers researchers across the Western U.S. to turn deep-tech innovations into scalable ventures through NSF-sponsored training.

- Landmark public investments have boosted Boulder's innovation momentum, including a $160 million National Science Foundation award for the NSF ASCEND Engine, and $127 million in state and federal funding to launch the Elevate Quantum tech hub. CU Boulder and Venture Partners were instrumental in both efforts, expanding opportunities for new innovations across climate, quantum, and sustainable industries.

- CU Boulder has worked to strengthen its systems to support complex, interdisciplinary work in 2024 by launching the New Frontiers program accelerates early-stage research.

Boulder Venture Club

Acceleration in action: Company highlights

EerDx

EerDx, began when Bart Emery, CEO, met Jianliang Xiao (CU Boulder Paul M. Rady Mechanical Engineering) through the Embark Deep Tech Startup Creator and learned about the flexible biosensor technology that serves as the basis for EerDx's device. EerDx is using this technology to develop a comfortable diagnostic earbud device that provides accurate sleep study and EEG data in a non-laboratory setting.

Mesa Quantum

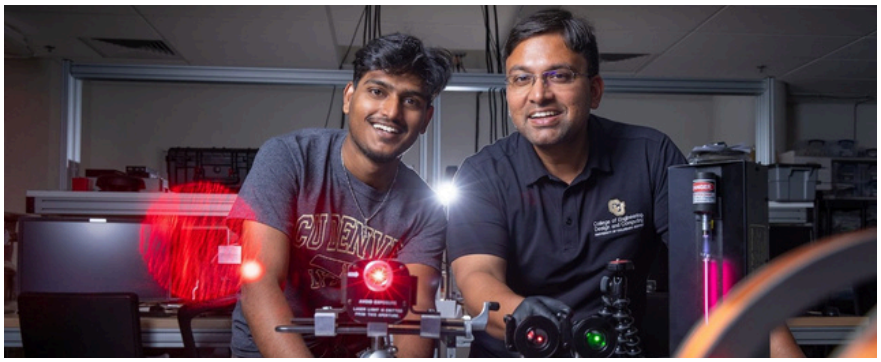
Venture Partners helped match a motivated grad student, Sristy Agrawal (NIST, JILA, CU Boulder Physics), with a novel atomic clock invented in Svenja Knappe's lab (CU Boulder Paul M. Rady Mechanical Engineering). Mesa Quantum is ushering in the next generation of chip-scale atomic clocks and quantum sensors, powering the industries of tomorrow in fields like autonomous vehicles and advanced deep-water oil exploration.

Pastificio

Pastificio, founded by CU Boulder alumna Claudia Bouvier during her Engineering Management master's studies and nurtured through the Catalyze CU incubator, crafts sustainable, heirloom-grain pasta—from farmers market roots to Whole Foods—showcasing CU's support for mission-driven, community-connected entrepreneurs.

CU Denver

An Urban Campus That Prototypes the Future



"Studying entrepreneurship at CU Denver has allowed me to pursue my passion for innovation and problem-solving. Our classes constantly challenge us to think outside the box and to truly understand the problem we are trying to solve."

— Timothy "Chuck" Nicholls, MBA

Denver's Ecosystem

"CU Denver has been huge for me, especially the Jake Jabs Center for Entrepreneurship. Competing in the 2023 CLIMB competition was a turning point. I won Best Healthcare and Mission-Driven awards, which opened so many doors. The center connected me to mentors, funding opportunities, and a community that believed in my mission. It inspired me to pursue an MS in Entrepreneurship so I could sharpen my skills and better scale File l'Espoir."

- Rhama Diallo, a current MS in Entrepreneurship student

Rooted in the heart of downtown, CU Denver turns the city into its first customer, channeling $832 million annually into Colorado's economy and feeding that momentum into student–faculty ventures. More than 15,000 students have the opportunity to engage in hands-on learning through research, internships, and entrepreneurship, graduating with résumés built on real-world experience. From quantum education and innovation and applications in building materials to creative industries, CU Denver offers nationally ranked programs that blend academic rigor with market relevance.

Incubators like The CLIMB and Smart Futures Lab help ideas scale, while partnerships with the City of Denver bring innovation into the community.
CU Denver is training the next generation of builders, artists, and entrepreneurs. Here's how the campus moves ideas from classroom concept to market-ready company.....

Education & Talent

CU Denver's innovation & entrepreneurship educational ecosystem is unique because it is intimately connected with the Denver community through research, internship, and mentorship opportunities.

- 100+ degree paths that integrate research apprenticeships, internships, and experiential learning, so 15,000 diverse learners have the opportunity to graduate with résumés already stamped by real-world work.

- The states only Masters in Entrepreneurship, and a BS and Minor through the Jake Jabs Center for Entrepreneurship.

- CU Denver is driving workforce innovation in quantum by offering a cross-disciplinary Quantum Information Technology Certificate, taught by leading physicists and engineers—and anchoring the university within Elevate Quantum, a Rocky Mountain West Tech Hub that secured a $127 million federal and state investment to advance quantum R&D across the region.

- Bioengineering: Design studios on the Auraria Campus, clinical suites at CU Anschutz, and prototypes ranging from 3-D cartilage scaffolds to heart patches.

- College of Arts & Media turns creativity into enterprise: CU Denver's College of Arts & Media (CAM) is celebrating its fifth consecutive year being named one of the best schools to study music business by Billboard.

Climb Competition Winners


Quantum certificate in action

Student Stories

Rhama Diallo

a current MS in Entrepreneurship student, won the CLIMB's Best Healthcare and Mission-Driven awards with File l'Espoir, a youth-powered blood-donation network that has already helped save 1,200 lives in Côte d'Ivoire.

Brittany Guzmán Taylor

a current MS in Entrepreneurship student and successful small business owner, won the CLIMB with Anchora, a melanin- and pregnancy-safe micro-channeling treatment poised to mainstream inclusive skincare.

Maslin Mellick and Olivia Collier

CU Denver architecture alumni Maslin and Olivia, sparked by a studio thesis on Denver's massive "Tire Mountain" landfill, are turning discarded tires into carbon-negative building cladding, showing how campus curiosity can fuel a circular-economy breakthrough.

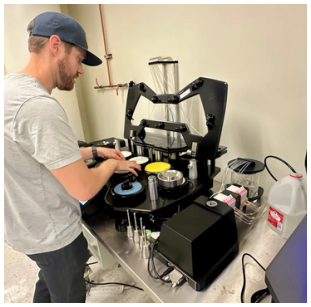
Austin Long

CU Denver PhD candidate Austin Long—shaped by the university's Quantum Information certificate and a trifecta of engineering, physics, and coding, aims to turn quantum theory into workforce-ready technology that can revolutionize everything from materials science to medicine.

Incubation & Testbeds

- Jake Jabs Center for Entrepreneurship, in addition to running a range of academic and professional programs, they offer year-round micro-grants, venture-fund internships, and THE CLIMB pitch series ($1.2 million awarded, 600+ mentor hours). Additionally providing community support through programs like TechUp seminars and incubators, in partnership with the city of Denver, help teams go from zero to one and offer a la carte workshops for Colorado's small business owners.

- Smart Futures Lab, offers a free, six-month incubator offering expert-led curriculum, mentorship, and pilot pitch opportunities. Serving students, faculty, and a global community, including founders from Canada and Sweden. The program has, in just two years, supported 19 companies, launched 21 pilot projects, and secured six patents. Their accelerator provides support for innovators in the smart city space. They show results in two years. Their companies have secured 22 new jobs and $4.5 million in outside capital and 40+ government and public sector partners that help accelerate smart city technology.

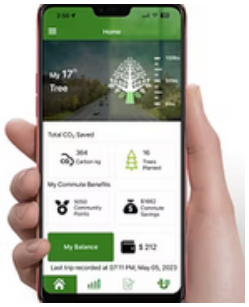


- The Outside Lab @ CU Denver is a world-class innovation center for gear testing, teaching, research, and content creation. With the co-founders of Outside Inc., CU Denver has created a unique public/private partnership leveraging complementary resources to serve consumers, brands, and students. The lab enables faculty, students, editors, and brand partners to evaluate product performance with equipment and protocols beyond the reach of most brands. They test hard goods and apparel from all outdoor sports, using standardized methods designed by the engineering faculty. When paired with results from Outside's field testing, the lab data yields the most comprehensive third-party reviews available to outdoor consumers.

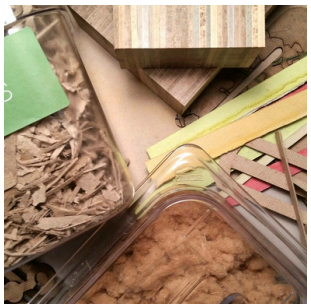
Acceleration, Funding & Impact

University-supported innovators are generating far-reaching impact across industries.

- Creative-industry grads include Oscar-nominated filmmakers, music-tech entrepreneurs, and VFX leaders, proving art can be a high-growth business. Alumni successes scale the model: muralist-entrepreneur Thomas “Detour” Evans (BS ’08, MBA ’12) built a national art brand, wrote "Be the Artist, and mentors founders at THE CLIMB competition.



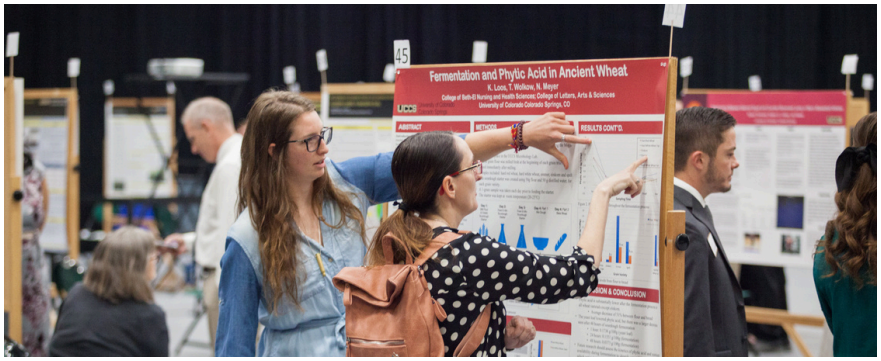
- Commutrics, a company based on CU Denver IP in the smart-cities SaaS space, led by inventor Moatassem Abdallah and launched through Venture Partners, helps employers reduce commuter CO_2. Pilot projects feed anonymous data back to CU urban-planning research. CU collaborations reduce drug development timelines by years and slash city-scale carbon emissions, proof that public dollars plus CU know-how create investable, high-impact ventures.

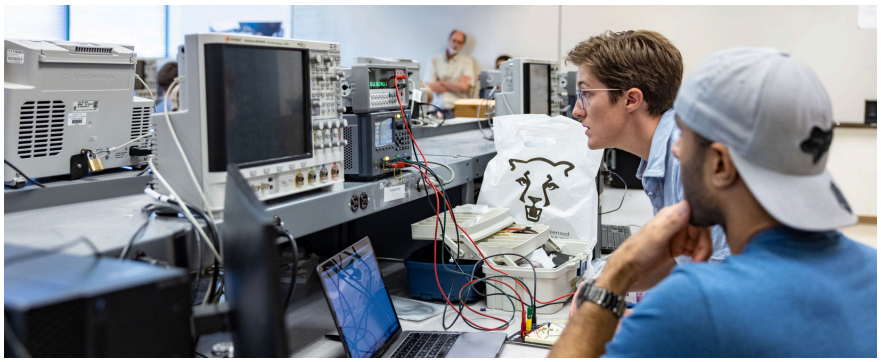


- BioSIPs®: Julee’s lab has become a launching point for impactful ideas in the green building space. Professor Julee Herdt’s carbon-negative building panels is CU’s first architecture spin-off company, which won U.S. Green Building Council honors and DoD funding to cut Army base emissions.

UCCS

Innovation Pathways from Idea to Impact





"Much of my success stems from my alma mater, UCCS, which not only provided me with resources and support but also fostered a culture of innovation, resilience, and collaboration."

— Lee Haider, Bachelor of Innovation + Marketing

UCCS's Ecosystem

"The professors, The Garage, the Bachelor's of Innovation - without them, I wouldn't be here. I would've never even started."

Nicholas Ramirez, Sophomore at UCCS and Founder of Wobbleless

CU Colorado Springs: Innovation Pathways from Idea to Impact

Surrounding the University of Colorado Colorado Springs, the Pikes Peak region has become a proving ground for translating ideas into action, from classroom to community, lab bench to market. UCCS structures this journey through three deliberate phases: education, incubation, and acceleration, anchored by specialized programs and strategic partnerships that bring innovation to life.

Education, Talent, Incubation & Testbeds

UCCS has built a robust talent pipeline, connecting its 12,000+ students with one of the fastest-growing economies in Colorado. The Bachelor of Innovation ™, the nation's only undergraduate family of innovation degrees, blends engineering, business, and creative disciplines. Since 2007, hundreds of students have graduated from this program, launching projects with paying clients as early as their freshman year.

C3 Innovation is an exciting new physical and virtual place where UCCS and the world meet for innovation. C3 stands for Curiosity, Creativity, and Community. C3 fosters strategic partnerships with local businesses, government agencies, and nonprofits to address complex challenges and drive economic growth. By collaborating with thought leaders and global innovators, including Deloitte, El Pomar Foundation, and Catalyst Campus for Technology and Innovation, C3 connects expertise and resources to create impactful solutions that benefit both the community and the broader economy. Current C3 emphasis areas include AI, app development, space, healthcare, cybersecurity, and the arts. In the Fall of 2025, 14 professors from across multiple colleges and disciplines will begin their two-year Faculty Innovation Fellowships - sponsored by the El Pomar Foundation.

Cybersecurity is a flagship strength. UCCS houses Colorado's first NSA Center of Academic Excellence in Cyber Research (designated 2024) and is one of only 15 National Centers of Academic Excellence in Cyber Defense statewide. Producing over 150 cyber graduates each year, UCCS expanded the Kevin W. O'Neil Cybersecurity Education and Research Center which co-locates the National Cybersecurity Center and Space ISAC, giving students mission-critical experience on defense and space security challenges. UCCS extends its reach with K–12 cyber bootcamps, regional competitions, and public-sector partnerships to develop Colorado's cybersecurity workforce of the future.

El Pomar Institute for Innovation and Commercialization supports more than 200 students annually through the startup garage, coursework, pitch nights, and faculty-led research, feeding promising ideas into next-stage accelerators such as Venture Attractor.

Education, Talent, Incubation & Testbeds

In community health and resilience, the Lyda Hill Institute's GRIT program, developed in response to COVID-19, has served more than 5,000 learners across all 50 states and 39 countries. Through its GRIT-e web app, the program now offers bilingual resources in English and Spanish and is rolling out specialized curricula for Native communities, teens, and caregivers. The Institute aims to train 25,000 local GRIT Coaches by 2030, helping Colorado Springs become the world's first "GRIT City."

UCCS fosters innovative, sustainable community practices. The UCCS Farm operates on three acres as a regenerative agriculture testbed, engaging dozens of student interns and community volunteers each semester. Its 24/7 Farmstand distributes more than 5,000 pounds of free produce and eggs annually to students facing food insecurity, while student-run micro-enterprises supply local grocery stores with seasonal harvests, bridging mission-driven food systems with revenue-generating enterprise.

In the arts, a collaboration with New York's Public Theater, one of the nation's leading cultural institutions, brings guest directors, internships, and new works to UCCS's Visual and Performing Arts program. Since Kevin Landis launched this partnership, it has helped stage eight world premieres in Colorado Springs before taking them to national venues, strengthening the local creative economy.

Student Stories

Robert Drone

a senior in the Cyber Security program, With half a million cybersecurity jobs unfilled nationwide, Robert is using virtual reality to inspire the next generation of digital defenders, starting in middle school.

Alexes Hernandez

UCCS student Alexes Hernandez, has built Wild Pup & Co. into a fast-growing brand, proving that even the simplest frustrations can spark a movement.

Nicholas Ramirez

UCCS Bachelor of Innovation student, flipped a nasty skateboard wipeout into Wobbleless—a patent-pending “training-wheel” device forged in The Garage incubator.

Acceleration & Funding

Cyber Security K12 Program


Scale to $1M Boot Camp

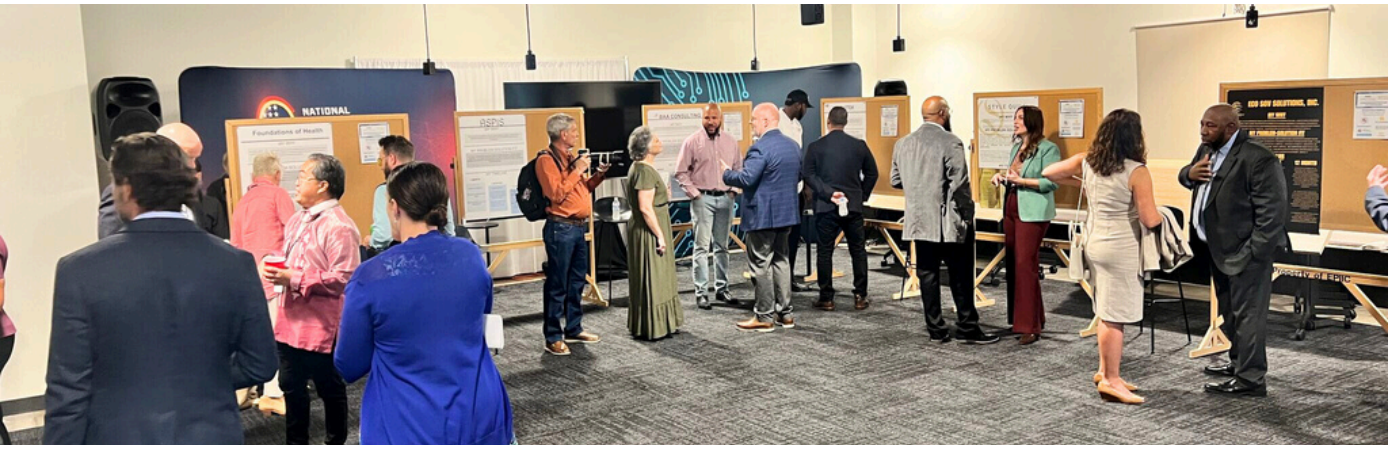
UCCS accelerates promising ventures through its Venture Attractor, the world's first university-based "attractor" model. Since 2021, Venture Attractor has:

- Supported 25 startups, distributing $255,000 in non-dilutive funding and generated more than $2.25 million in revenue growth across sectors ranging from health innovation to outdoor recreation
- Supported 31 startups and distributed $305,000 on Torch Grants. The revenue generation is now over $5M

Among its success stories is 2024 Torch-Grant recipient Colin Plover, Ph.D., M.P.H., R.N., who relocated his nursing-operations SaaS company from Philadelphia to Colorado Springs after participating in the program. (Read more).

The Green Action Fund, funded and led by students, is another acceleration catalyst. Made permanent by a 2024 student vote, the GAF has invested in over 100 campus projects over the past decade, from solar arrays to speaker series. Recent standouts include a sustainable bioleaching experiment in microgravity to recover valuable metals for space exploration, as well as a student-designed, bring-your-own-container refill station for soaps and lotions at the campus bookstore, soon expanding to dry goods and personal-care products.

Why it Works



- Cluster Density: Within a 10-mile radius, UCCS benefits from overlapping cybersecurity, defense, health, outdoor recreation, and wellness sectors, giving founders unmatched opportunities for customer discovery and collaboration.
- Full-Stack Support: From the Bachelor of Innovation to Venture Attractor's scale-to-$1M bootcamps, UCCS offers pathways at every stage of venture growth.
- Community-First Mindset: Programs like GRIT, the Farm, and the Green Action Fund embed local needs into global solutions, ensuring innovation stays rooted in impact.
- UCCS is proving that resilient communities, secure networks, sustainable food systems, and high-altitude adventures can all grow from the same ecosystem, demonstrating that bold ideas born at 6,000 feet can still change the world.

Let's work together!

- If you are a student currently working on a business, or have an idea you want to turn into a business? Let us know what you're working on! Apply – The Garage
- Alumni and Community Members: Want to help support UCCS Entrepreneurs? We have opportunities to mentor companies, host workshops, guest speak, sponsor programs and more! Reach out to lplumme3@uccs.edu or ldoster@uccs.edu for more information.

APPENDIX A

Campus Programs & Opportunities

Seeding Innovation Ecosystems

CU Ventures That Changed the Game

Select CU Spin-outs

Company	Description	Campus / Department	Outcome	Year
Amgen (AMGN)	Co-founded by CU Boulder chemistry professor Marvin Caruthers; today a ~$150 B biotech bellwether that still hires heavily in Colorado.	Boulder / Chemistry	IPO	1983
Eyetech	CU ophthalmology spin-out that co-developed Macugen for AMD; acquired for $935 M in 2005.	Anschutz / Ophthalmology	Acquisition	2005
Sirna Therapeutics (RZYM/SRNA)	Born from CU Nobel laureate Tom Cech's groundbreaking RNA chemistry, RNA-interference pioneer Sirna Therapeutics, CU's first post-Human Genome Project biotech IPO, marked Big Pharma's pivot to RNA when Merck acquired it for $1.1 billion in 2006.	Boulder / Biochemistry	Acquisition/IPO	2006
Myogen (MYOG)	Pulmonary-hypertension biotech spun from CU cardiology labs from work by Dr. Lienwand at CU and Dr. Bristow; Gilead paid $2.5 B in 2006, giving it a cardiovascular beachhead.	Boulder, Denver / CU Cardiovascular Institute	Acquisition	2006
RxKinetix	CU Anschutz drug-delivery venture targeting oral-mucositis; Endo paid up to $95 M in 2006, adding a Phase-II asset.	Boulder / Chemical and Biological Engineering	Acquisition	2006

Seeding Innovation Ecosystems

CU Ventures That Changed the Game

Select CU Spin-outs

Company	Description	Campus / Department	Outcome	Year
Applied Biosystems	DNA-sequencing workhorse founded by CU distinguished professor, Marvin Caruthers; $6.7 B 2008 merger formed Life Technologies, later part of Thermo Fisher.	Boulder / Biochemistry	Acquisition	2008
Archemix (hemophilia assets)	Aptamer-drug shop leveraging CU nucleic-acid expertise; Baxter bought its Factor-inhibitor program in 2010, expanding rare-disease pipeline.	Boulder / Biochemistry	Acquisition	2010
Taligen Therapeutics	CU Professor V. Michael Holers, M.D, founder of CU-licensed complement-pathway biologics; Alexion paid $111 M upfront in 2011 to expand its rare-disease antibody pipeline.	Anschutz / Rheumatology	Acquisition	2011
LineRate Systems	CU computer-science spin-out started by John Giacomoni and Assistant Professor Manish Vachharajani, delivering software-defined Layer-7 load-balancing; F5 picked it up in 2013 to accelerate its SDN roadmap.	Boulder / Computer Science/Electrical Eng	Acquisition	2013
OPX Biotechnologies	Microbial-fermentation platform from CU chemical engineering; Cargill bought its bio-acrylic process in 2015 to scale green chemicals.	Boulder / Chemical Engineering	Acquisition	2015

Seeding Innovation Ecosystems

CU Ventures That Changed the Game

Select CU Spin-outs

Company	Description	Campus / Department	Outcome	Year
Rain Oncology (RAIN) (formerly Rain Therapeutics)	Co-founded by CU Anschutz physician-scientist Dr. Robert Doebele, precision-oncology firm Rain Oncology turned his NTRK/MDM2 research into lead drug milademetan, rode a high-profile IPO, and was snapped up by AI-driven platform Pathos in 2024 for $1.16 per share plus CVRs.	Anschutz / Oncology	Acquisition/IPO	2021
SiLion	Silicon-anode battery startup spun from CU materials labs and Boulder professor Chunmei Ban; Tesla quietly acquired it by 2021 (confirmed via patent filing) to power its 4680 “Roadrunner” cells.	Boulder / Mechanical Engineering	Acquisition	2021
Solid Power (SLDP)	CU mechanical-engineering spin-out founded by Doug Campbell, Conrad Stoldt, and Sehee Lee, developing solid-state EV batteries; flagship of Colorado’s cleantech cluster.	Boulder / Mechanical Engineering	IPO	2021
SomaLogic (SLGC)	Proteomics platform founded by CU Professor Larry Gold; merged in 2024 to create a multi-omics tools leader worth ≈ $1 B.	Boulder / BioFrontiers Institute	Acquisition / IPO	2021
Ball Corp (BALL)(Ball Aerospace division)	Ball Aerospace’s roots in CU’s physics community helped cement the Front Range as a space-tech hub; the unit’s 2024 $5.6 B sale to BAE was one of Colorado’s biggest exits. CU’s first commercial spin-out (1956); still shaping flagship missions like the James Webb Telescope. 500+ CU alumni on staff; the collaboration “greased the gears of an entrepreneurial engine” that powers today’s space startups, started with part-time CU student, Katie Melbourne.	Boulder / Physics	Acquisition/IPO	2024

Seeding Innovation Ecosystems

CU Ventures That Changed the Game

Select CU Spin-outs

Company	Description	Campus / Department	Outcome	Year
LiteWave Technologies	Emerged from the lab of Jeffrey Thayer, professor emeritus and research professor in the Ann and H.J. Smead Aerospace Engineering Sciences. CU Boulder LiDAR pioneer that shrank ocean-mapping sensors from van-sized rigs to drone payloads; snapped up in 2024 by government-tech contractor Arcfield, underscoring CU's deep-tech pipeline.	Boulder / Aerospace Engineering	Acquisition	2024
OnKure Therapeutics (OKUR)	Co-founded by CU Boulder biochemist Prof. Xuedong Liu; lead PI3Kα inhibitor OKI-219 and follow-on assets were co-developed with the CU Cancer Center now 15 CU alumni are now on staff.	Boulder / Biochemistry	IPO	2024
Q32 Bio (QTTB)	A CU Healthcare Innovation Fund–backed immunology startup, founded through a collaboration between Michael Holers, MD, and Joshua Thurman, MD, of the CU School of Medicine, and Stephen Tomlinson, PhD, of the Medical University of South Carolina, is now a publicly traded company.	CU Healthcare Innovation Fund	IPO	2024

APPENDIX B

2022-2023 Coursework

CU Anschutz Medical Campus

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Biomedical Entrepreneurship	BSBT 6801	School of Medicine
Reg Env of Life Science Innovation - Drug Discovery	BSBT 6802	School of Medicine
Reg Env of Live Science Innovation - Medical Devices	BSBT 6803	School of Medicine
Bioinnovation Regulations in Medical Devices and Drug Discovery	BSBT 6804	School of Medicine
Internship - Technology and Innovation	BSBT 6939	School of Medicine
Scientific Grant Review Process: CCTSI Proposals	CLSC 7300	School of Medicine
Inworks: Choose Your Own Adventure: Experiences in Design, Innovation and Prototyping	IWKS 3180	College of Engr Design & Comp
Communication and Innovation	JTCM 6600	School of Public Health
Leadership, Financial Management and Innovation	NURS 6800	College of Nursing
Quality, Safety, & Innovative Nursing Practice-RN	NURS 4860	College of Nursing

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Interaction Design and the Digital Delivery of Products and Services	APRD 5004	College of Media, Comm & Info
Design for Startups	APRD 5006	College of Media, Comm & Info
Design for Startups	APRD 5006	College of Media, Comm & Info
Introduction to Designing for Entrepreneurism	APRD 5006	College of Media, Comm & Info
Access to Tools for Entrepreneurism by Design	APRD 5008	College of Media, Comm & Info
Designing for Scale	APRD 5008	College of Media, Comm & Info
Innovative Technologies for Design	APRD 5018	College of Media, Comm & Info
Design for Social Innovation	APRD 4501	College of Media, Comm & Info
Case Studies in Social Impact	ATLS 5230	College of Engr & Applied Sci
Case Studies in Social Impact	ATLS 5230	College of Engr & Applied Sci
Technology for Social Impact Laboratory	ATLS 5240	College of Engr & Applied Sci
Creative Technologies	ATLS 5410	College of Engr & Applied Sci
Professional Seminar: Business of Creativity	ATLS 5420	College of Engr & Applied Sci

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Advanced Special Topics in Creative Technology and Design	ATLS 5519	College of Engr & Applied Sci
Social Impact Practicum	ATLS 6910	College of Engr & Applied Sci
Strategic and Entrepreneurial Thinking	BCOR 2304	Leeds School of Business
Doctoral Seminar: Special Topics in Innovation	BPOL 7530	Leeds School of Business
Doctoral Seminar - Special Topics in Entrepreneurship	BPOL 7560	Leeds School of Business
Innovation & Entrepreneurship I	BUSM 3010	Leeds School of Business
Innovation & Entrepreneurship II	BUSM 3011	Leeds School of Business
Product Development II	BUSM 3011	Leeds School of Business
Product Development II	BUSM 3011	Leeds School of Business
Entrepreneurship and Innovation	BUSM 4010	Leeds School of Business
Entrepreneurship and Innovation	BUSM 4010	Leeds School of Business
Sports Entrepreneurship	BUSO 2200	Leeds School of Business
Entrepreneurial Media	CMCI 3202	College of Media, Comm & Info

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Introduction to Blockchain	CSCI 5240	College of Engr & Applied Sci
Startup Essentials: Entrepreneurial Projects in Computing	CSCI 5340	College of Engr & Applied Sci
Entrepreneurial Projects II	CSCI 5350	College of Engr & Applied Sci
Introduction to Blockchain	CSCI 4240	College of Engr & Applied Sci
Startup Essentials: Entrepreneurial Projects in Computing	CSCI 4348	College of Engr & Applied Sci
Entrepreneurial Projects II	CSCI 4358	College of Engr & Applied Sci
Solution Identification and Proposal Development	CVEN 5139	College of Engr & Applied Sci
Introduction to Blockchain	CYBR 5240	College of Engr & Applied Sci
Embedded Interface Design: Rapid Prototyping Emb I/F Designs	ECEA 5347	College of Engr & Applied Sci
Economics of Entrepreneurship	ECON 4717	College of Arts & Sciences
Getting Started with Technology Startups	EMEA 5091	College of Engr & Applied Sci
Getting Started with Technology Startups	EMEA 5091	College of Engr & Applied Sci
Creating a Technology Startup Company	EMEA 5092	College of Engr & Applied Sci

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Creating a Technology Startup Company	EMEA 5092	College of Engr & Applied Sci
Forming, Funding, and Launching a Technology Startup Company	EMEA 5093	College of Engr & Applied Sci
Forming, Funding, and Launching a Technology Startup Company	EMEA 5093	College of Engr & Applied Sci
Product Design for the Circular Economy	EMEA 5222	College of Engr & Applied Sci
Managing the New Product Development Process	EMEA 5402	College of Engr & Applied Sci
Product Innovation Management	EMEA 5403	College of Engr & Applied Sci
Marketing and Technology Ventures	EMEN 5090	College of Engr & Applied Sci
Entrepreneurship for Engineers	EMEN 5094	College of Engr & Applied Sci
Technology Entrepreneurship	EMEN 5094	College of Engr & Applied Sci
Technology Entrepreneurship	EMEN 5094	College of Engr & Applied Sci
Product Development and Design	EMEN 5400	College of Engr & Applied Sci
Engineering and Entrepreneurship for the Developing World	EMEN 4200	College of Engr & Applied Sci
Entrepreneurship and Marketing	EMEN 4800	College of Engr & Applied Sci

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Technology Ventures and Marketing	EMEN 4800	College of Engr & Applied Sci
Entrepreneurial Product Development	EMEN 4820	College of Engr & Applied Sci
New Venture Creation	EMEN 4825	College of Engr & Applied Sci
Social Innovation and Sustainable Cities	ENVM 5050	College of Arts & Sciences
Entrepreneurship and Applied Project Management	ENVM 5076	College of Arts & Sciences
Capstone Innovation Lab 1	ENVM 6001	College of Arts & Sciences
Capstone Innovation Lab 2	ENVM 6002	College of Arts & Sciences
Human Centered Design and Entrepreneurship Strategies	EPOD 3105	Pgm Environmental Design
Innovation: From Creativity to Entrepreneurship	ESBM 3100	Leeds School of Business
Innovation: From Creativity to Entrepreneurship	ESBM 3100	Leeds School of Business
Introduction to Entrepreneurship	ESBM 3100	Leeds School of Business
Entrepreneurial Environments	ESBM 3700	Leeds School of Business
Entrepreneurial Finance	ESBM 4570	Leeds School of Business

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
New Venture Creation	ESBM 4830	Leeds School of Business
Invention and Innovation	GEEN 3400	College of Engr & Applied Sci
Global Intensive: International Strategy and Entrepreneurship	INBU 3500	Leeds School of Business
Entrepreneurship and Empowerment in South Africa	INBU 4925	Leeds School of Business
Venture Capital and Private Equity	LAWS 7271	School of Law
Entrepreneurial Law Clinic	LAWS 7619	School of Law
Entrepreneurship	MBAE 6100	Leeds School of Business
Creating Value Through Innovation	MBAE 6470	Leeds School of Business
Entrepreneurship	MBAX 6100	Leeds School of Business
Entrepreneurship	MBAX 6101	Leeds School of Business
Entrepreneurial Finance	MBAX 6110	Leeds School of Business
Entrepreneurial Finance	MBAX 6111	Leeds School of Business
Social Entrepreneurship in the US and Global Economies	MBAX 6140	Leeds School of Business

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Entrepreneurship: High Growth Companies	MBAX 6160	Leeds School of Business
New Venture Creation	MBAX 6170	Leeds School of Business
New Venture Creation	MBAX 6171	Leeds School of Business
New Venture Launch	MBAX 6180	Leeds School of Business
Projects in Entrepreneurial Companies	MBAX 6190	Leeds School of Business
Special Topics in Entrepreneurship	MBAX 6195	Leeds School of Business
Entrepreneurship Valuation and Investment Seminar	MBAX 6280	Leeds School of Business
Entrepreneurship Valuation and Investment Seminar2	MBAX 6281	Leeds School of Business
Entrepreneurship Valuation and Investment Seminar 3	MBAX 6282	Leeds School of Business
New Product Development	MBAX 6361	Leeds School of Business
Ind Study Entrepreneur	MBAX 6961	Leeds School of Business
Disruptive Entrepreneurship in the Internet's New Economies	MDST 2011	College of Media, Comm & Info
Managing Growth: Entrepreneurship and High Growth Ventures	MGMT 4160	Leeds School of Business

CU Boulder

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Managing Growth: Entrepreneurship and High Growth Ventures	MGMT 4160	Leeds School of Business
The Entrepreneurial Artist	MUSC 5988	College of Music
The Entrepreneurial Artist	MUSC 4988	College of Music
Music Entrepreneurship Certificate Capstone	MUSC 4998	College of Music
Leading Change and Innovation	ORGL 5010	Cross-College Programs
Strategy and Innovation	ORGL 5315	Cross-College Programs
Building and Leading Innovative Work Teams	ORGL 5320	Cross-College Programs
Designing Social Innovations	SOCY 4160	College of Arts & Sciences
Executing Social Innovations	SOCY 4161	College of Arts & Sciences
Social Entrepreneurship & Sustainability	SSIR 1010	College of Arts & Sciences

UCCS

List of Coursework in the Year of 2022-2023

Class	Course	School/College
Managing Innovation for Strategic Advantage	BUAD 6610	Coll of Business & Admin
Entrepreneurship and New Ventures	BUAD 6800	Coll of Business & Admin
Digital Strategy & Innovation	BUAD 7300	Coll of Business & Admin
Rapid Prototyping with FPGAs	ECE 5211	Coll of Engineering & Appl Science
Leading Innovation in Nonprofits and Social Enterprises	PAD 5160	College of Public Service
Social Entrepreneurship	PAD 5180	College of Public Service
Introduction to Entrepreneurship	ENTP 1000	Coll of Business & Admin
Introduction to Social Entrepreneurship	ENTP 1001	Coll of Business & Admin
Principles of Entrepreneurship	ENTP 3000	Coll of Business & Admin
Advanced Principles of Entrepreneurship	ENTP 3100	Coll of Business & Admin
Topics in Entrepreneurship	ENTP 3950	Coll of Business & Admin
Entrepreneurship and Strategy	ENTP 4500	Coll of Business & Admin

UCCS

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Project Lead The Way - Biomedical Innovation	BIOL 2040	Coll of Letters, Arts & Sci
Business Law and Innovation	BLAW 2010	Coll of Business & Admin
Managing Innovation for Strategic Advantage	BUAD 6610	Coll of Business & Admin
Entrepreneurship and New Ventures	BUAD 6800	Coll of Business & Admin
Digital Strategy & Innovation	BUAD 7300	Coll of Business & Admin
Adventure Education and Experiential Learning	COUN 5070	College of Education
Intro to Applied Cryptography	CS 5920	Coll of Engineering & Appl Sci
Introduction to Applied Cryptography	CS 4920	Coll of Engineering & Appl Sci
Undergraduate Independent Study in Computer Science Entrepreneurship Focus	CS 9400	Coll of Engineering & Appl Sci
Rapid Prototyping with FPGAs	ECE 5211	Coll of Engineering & Appl Sci
Rapid Prototyping with FPGAs	ECE 4211	Coll of Engineering & Appl Sci
Introduction to Entrepreneurship	ENTP 1000	Coll of Business & Admin
Introduction to Social Entrepreneurship	ENTP 1001	Coll of Business & Admin

UCCS

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Principles of Entrepreneurship	ENTP 3000	Coll of Business & Admin
Advanced Principles of Entrepreneurship	ENTP 3100	Coll of Business & Admin
Topics in Entrepreneurship	ENTP 3950	Coll of Business & Admin
Entrepreneurship and Strategy	ENTP 4500	Coll of Business & Admin
Innovation Capstone	ENTP 4500	Coll of Business & Admin
Undergraduate Research - Independent Study	HIST 9499	Coll of Letters, Arts & Sci
Productivity Apps for the Workplace	INFS 1100	Coll of Business & Admin
The Innovation Process	INOV 1010	Coll of Engineering & Appl Sci
Innovation Team: Analyze and Report	INOV 2010	Coll of Engineering & Appl Sci
Innovation Team: Research and Execute	INOV 3010	Coll of Engineering & Appl Sci
Independent Study in Innovation	INOV 4000	Coll of Engineering & Appl Sci
Innovation Team: Design and Lead	INOV 4010	Coll of Engineering & Appl Sci
Advancing Innovation Practicum	INOV 4100	Coll of Engineering & Appl Sci

UCCS

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Introduction to Entrepreneurship	INOV 1000	Coll of Letters, Arts & Sci
Introduction to Social Entrepreneurship	INOV 1001	Coll of Letters, Arts & Sci
The Innovation Process	INOV 1010	Coll of Letters, Arts & Sci
Social Innovation	INOV 1011	Coll of Letters, Arts & Sci
Innovation Team: Analyze and Report	INOV 2010	Coll of Letters, Arts & Sci
Business Law and Innovation	INOV 2500	Coll of Letters, Arts & Sci
Innovation Team: Research and Execute	INOV 3010	Coll of Letters, Arts & Sci
Independent Study in Innovation	INOV 4000	Coll of Letters, Arts & Sci
Innovation Team: Design and Lead	INOV 4010	Coll of Letters, Arts & Sci
Advancing Innovation Practicum	INOV 4100	Coll of Letters, Arts & Sci
Innovation Capstone	INOV 4500	Coll of Letters, Arts & Sci
Technical Writing, Proposals, and Presentations	INOV 2100	Coll of Letters, Arts & Sci
Technical Writing, Proposals, and Presentations	INOV 2100	Coll of Engineering & Appl Sci

UCCS

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
The Business of Music: Entrepreneurship and Creative Enterprise	MUS 4250	Coll of Letters, Arts & Sci
Capstone, Innovation, and Leadership	NURS 4480	Coll of Nursing & Health Sci
Practical Applications in Social Impact	OSIM 4333	Coll of Business & Admin
Leading Innovation in Nonprofits and Social Enterprises	PAD 5160	College of Public Service
Social Entrepreneurship	PAD 5180	College of Public Service
Leading Innovation in Nonprofits and Social Enterprises	PADM 5160	College of Public Service
Undergraduate Research and Creative Works - Independent Study	PSY 9499	Coll of Letters, Arts & Sci
Arts Innovations: Methods and Practices	VAPA 1500	Coll of Letters, Arts & Sci
Independent Study - Research and Creative Works	WEST 9499	Coll of Letters, Arts & Sci
Advancing Innovation Practicum	INOV 4100	Coll of Letters, Arts & Sci

CU Denver

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Transformative Technologies Impacting Globalization	BANA 6600	Business School
Medical Device Design and Entrepreneurship	BIOE 5300	College of Engr Design & Comp
Bioengineering Design and Prototyping I	BIOE 1010	College of Engr Design & Comp
Bioengineering Design and Prototyping II	BIOE 1020	College of Engr Design & Comp
Medical Device Design and Entrepreneurship	BIOE 4300	College of Engr Design & Comp
Security & Cryptography	CSCI 5407	College of Engr Design & Comp
Fundamentals of Engineering Design Innovation	CSCI 1200	College of Engr Design & Comp
Security & Cryptography	CSCI 4407	College of Engr Design & Comp
Security and Cryptography	CSCY 4407	College of Engr Design & Comp
Fundamentals of Engineering Design Innovation	CVEN 1200	College of Engr Design & Comp
Fundamentals of Engineering Design Innovation	ELEC 1201	College of Engr Design & Comp
Fundamentals of Computational Innovation	ENGR 1100	College of Engr Design & Comp
Fundamentals of Engineering Design Innovation	ENGR 1200	College of Engr Design & Comp

CU Denver

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Strategizing the Startup Prelaunch	ENTP 6020	Business School
Corporate Entrepreneurship	ENTP 6021	Business School
The Startup Launch	ENTP 6024	Business School
Innovation in Fintech	ENTP 6110	Business School
Purpose-Driven Innovation in Social Entrepreneurship	ENTP 6200	Business School
Purpose-Driven Innovation in Social Entrepreneurship	ENTP 6200	Business School
AI-Driven Entrepreneurship	ENTP 6300	Business School
New Venture Operations and Project Management	ENTP 6620	Business School
Healthcare Innovation and Entrepreneurship	ENTP 6801	Business School
Legal and Ethical Issues of Entrepreneurship	ENTP 6822	Business School
Legal and Ethical Issues of Entrepreneurship	ENTP 6822	Business School
Entrepreneurial Financial Management	ENTP 6824	Business School
International Entrepreneurship	ENTP 6826	Business School

CU Denver

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
International Entrepreneurship	ENTP 6826	Business School
High Impact Sales for Entrepreneurs	ENTP 6836	Business School
Leadership for New and Innovative Ventures	ENTP 6848	Business School
Leadership in New Ventures	ENTP 6848	Business School
Innovation in Blockchain	ENTP 6860	Business School
The Fundamentals of Entrepreneurship	ENTP 3200	Business School
Essentials in Entrepreneurship	ENTP 3200	Business School
The Fundamentals of Entrepreneurship	ENTP 3200	Business School
Lean Startup Fundamentals	ENTP 3201	Business School
The Power of The Lean Startup	ENTP 3201	Business School
Leadership for New and Innovative Ventures	ENTP 3210	Business School
Visionary Leadership for New Ventures	ENTP 3210	Business School
Developing Innovative Ideas for New Ventures	ENTP 3240	Business School

CU Denver

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
High Impact Sales for Entrepreneurs	ENTP 3260	Business School
Experiential Topics in Entrepreneurship	ENTP 3900	Business School
Real Life Entrepreneurship: The Founder's Journey	ENTP 3900	Business School
Creating Impact Through Social Entrepreneurship	ENTP 4200	Business School
Creating Impact Through Social Entrepreneurship	ENTP 4200	Business School
Entrepreneurship Independent Study	ENTP 4840	Business School
Character and Product Prototyping	FINE 3532	College of Arts & Media
Blockchain, Crypto Investing and Trading Strategy	FNCE 6850	Business School
Blockchain, Crypto Investing and Trading Strategy	FNCE 3850	Business School
Blockchain and Emerging Technologies Impact Globalization	INTB 6600	Business School
Transformative Technologies Impacting Globalization	INTB 6600	Business School
International Social Entrepreneurship	INTB 1111	Business School
Human-Centered Design, Innovation and Prototyping	IWKS 2100	College of Engr Design & Comp

CU Denver

List of Coursework in the Year of 2022-2023

Class	Course #	School/College
Fundamentals of Computational Innovation	IWKS 2300	College of Engr Design & Comp
Fundamentals of Computational Innovation	MECH 1100	College of Engr Design & Comp
Fundamentals of Engineering Design Innovation	MECH 1200	College of Engr Design & Comp
Services Marketing for Traditional and Creative Industries	MKTG 6040	Business School
Services Marketing for Traditional and Creative Industries	MKTG 6040	Business School
New Product Development for Consumer and Sports Products	MKTG 4730	Business School
Music Industry Entrepreneurship	MUSC 4800	College of Arts & Media
Social Entrepreneurship	PUAD 5180	School of Public Affairs
Social Entrepreneurship	PUAD 4020	School of Public Affairs
Executive MBA Business Model Innovation	XBUS 6830	Business School

APPENDIX C

Footnotes

Anschutz Stories & Programs

Student Stories

Bridget Hoag: Zooming Out from Molecules to Meaning

By Pablo Diaz del Castillo

What if one small mutation, one wrong letter in your DNA, could lead to cancer decades later? And what if someone could prevent it from ever becoming a problem? Bridget Hoag is working to make that future real.

Bridget Hoag grew up in Boulder, Colorado. After studying biochemistry and working in biotech, she found her way back home, to CU Anschutz Medical Campus, where she's now a fourth-year PhD student researching how aging contributes to blood cancers. Her research at CU Anschutz could help reshape how we treat blood cancers in aging populations, and how we prepare the next generation to carry that work forward. "I've always loved science," she said, "but in undergrad, it was all broad chemistry. Eventually, I wanted to zoom out and understand how that chemistry plays out in the body."

After college, Hoag joined Genentech as an intern and later became part of the drug discovery team. There, she worked on small-molecule drugs and used automation to run large-scale experiments. It was exciting work, but she often felt disconnected from the bigger picture. "You're helping, but you don't always get to understand the full biology," she said. "That's what drove me to graduate school."

Understanding Cancer in New Ways

Today, Hoag is part of the James DeGregori Lab at CU Anschutz, where she studies how and why blood cancers like leukemia develop more often in people over 70. Specifically, she focuses on a disease called myelodysplastic syndrome (MDS), which affects the bone marrow and often leads to leukemia.

"It's not a solid tumor, it's your whole bloodstream, your bone marrow," she explained. "Older patients often don't respond well to full-dose chemotherapy or bone marrow transplants. So, we're trying to understand what's happening biologically that makes these diseases more common and harder to treat in aging populations."

Student Stories

Bridget Hoag: Zooming Out from Molecules to Meaning

Hoag uses mice to study how inflammation affects blood cells as we age. She collects and analyzes bone marrow samples to track how the cells change over time. Each project can take months, followed by weeks of data analysis. These cycles keep her days varied and her work dynamic.
She's also testing a newer technique called prime editing, a more precise version of CRISPR.

Traditional CRISPR acts like molecular scissors, cutting the DNA to disable or replace genes. But Hoag's work focuses on a single mutation, a tiny typo in the genetic code that can lead to cancer decades later. Prime editing doesn't make big cuts. Instead, it swaps out individual DNA bases, offering the exact precision needed to study how one small change can have lasting consequences. "It's a newer technology, and we're still figuring it out," she said. "But if it works, it could save years of waiting on aging mouse models."

Student Stories

Bridget Hoag: Zooming Out from Molecules to Meaning

Lab Work Meets Real Life

Hoag's passion for science doesn't stop in the lab. She's also a leader in the Academia Industry Alliance (AIA), a student-run group that helps connect researchers with biotech professionals across Colorado.

"I joined during my second year, when it was brought back after COVID," she said. "I started out helping plan happy hours, just bringing in industry folks to network informally with students." That grew into something bigger. Last year, with AIA, Hoag organized the Rocky Mountain Biotech Symposium, a student-led conference that brought together over 300 attendees, about half from local industry. The event featured science talks, career panels, and a company showcase.

"There's this idea that you have to move to Boston or San Francisco to work in biotech. We wanted to show students that there's great science and real opportunity here in Colorado."

AIA has since partnered with CU Innovations to keep building that bridge between students and industry. It's been rewarding work and effective. "I think part of innovation is knowing how to bring people together," Hoag said. "I'm not the person who's inventing the next CRISPR. But I'm good at spotting people's strengths and building teams that work."

Hoag hopes to stay grounded in education and community outreach. "I'm not going to be a medical doctor, but I can still help make better drugs, that's how I want to make a difference."

Even though she did not mention it, she is already making a difference. Hoag has been volunteering with a middle school located on campus, helping students with science fair projects and introducing them to lab basics. "Helping kids understand how to form a hypothesis, how to test something, that's where it starts," she said. "I want to stay connected to the community I live in."

That dual focus, pushing science forward while pulling others into it, is at the heart of Bridget Hoag's mission. She assured: "My goal is to help science continue, and to help people along the way, I want my work to matter." In the lab, in the classroom, and across Colorado's biotech community, Hoag is proving that innovation isn't just about discovery, it's about building the future, and bringing others with you.

Student Stories

Beyond the Bench: Lily Feldman's Path from Science to Patient Impact

By Pablo Diaz del Castillo

In the world of innovation, it's easy to think only entrepreneurs and CEOs are the ones changing the future. But in the labs and classrooms of CU Anschutz Medical Campus, a different kind of innovator is making an impact, one discovery at a time. Lily Elizabeth Feldman's story shows how resilience, creativity, and the right support can turn a scientific journey into a life-changing mission.

"Science doesn't happen in a silo. Everyone who's successful has had help getting there. It's our responsibility to reach back and help others too." — Lily Elizabeth Feldman, Ph.D. Candidate, CU Anschutz Medical Campus.

Growing up homeschooled in rural Vermont, Lily Feldman has always carved her own route, driven by curiosity and a desire to help others. Today, Feldman is an innovator, not because she followed a traditional entrepreneurial path, but because she's rethinking how medical research serves patients and closing the gap between science and care while helping others do the same.

While studying Emergency Medicine, Feldman developed a passion for improving patient care through hands-on lab experience. This led her to pursue a B.S. in Biochemistry at the University of New Mexico, where her research experience inspired to pursue a Ph.D. in Pharmacology and Molecular Medicine at the CU Anschutz Medical Campus. She moved to Colorado in 2020 and initially struggled financially, delivering for Uber Eats and Grubhub to make ends meet. It wasn't sustainable, but because of it, Feldman was able to find an unexpected opportunity: the CU Innovations Fellowship Program.

Student Stories

Beyond the Bench: Lily Feldman's Path from Science to Patient Impact

From the Lab to Real-World Change

Feldman was only looking for a second stream of income but quickly realized CU Innovations was much more. As a Venture Fellow at CU Innovations, she managed the state-funded Startup Toolbox Microgrant Program, which was focused on helping scientists and faculty navigate early steps in commercialization, from securing small grants to forming startup companies and protecting intellectual property. Feldman connected researchers to regulatory consultants, law firms, and branding specialists, helping bridge the huge gap between academic science and real-world impact. Feldman said: "Working at CU Innovations has been an amazing bonus to my Ph.D., because it has helped me see how much commercialization is happening at Anschutz, and how much of the work that we do is really going to the clinic and helping patients every single day."

Through CU Innovations, Feldman saw the many faces of innovation. It wasn't just about inventing a drug or launching a company. She realized innovation could mean discovering a new drug target, finding a better way to classify patients for treatment, or even changing how researchers communicate with clinicians.

"Being part of CU Innovations helped me see how broad innovation really is," she said. "It opened my eyes to all the different ways research can move the world forward." Feldman's work managing the Microgrant Program at CU Innovations showed her how research can lead to practical outcomes like new treatments, startups, and improved clinical tools. It also helped her understand the steps needed to move science beyond the lab. At the same time, her research on chemotherapy resistance gave her insight into the challenges faculty face, making her better at supporting their projects.

Feldman continued to push the boundaries in her research at CU Anschutz under the mentorship of Jim Costello Ph.D. There, she began investigating chemotherapy resistance in bladder and ovarian cancer. Her work revealed critical insights into why standard chemotherapy often fails — particularly in ovarian cancer, where only one in four women respond to treatment. Her goal is to better define the biological drivers of resistance, so doctors can either improve therapies or spare patients from unnecessary and painful treatments.

Student Stories

Beyond the Bench: Lily Feldman's Path from Science to Patient Impact

Her research has already led to a co-first author publication with a team at Cedars-Sinai, a major healthcare center. Her current projects involve genetic editing, bioinformatics, and collaborations with biophysics groups studying how cancer affects cell membranes. Despite the complexity of her work, Feldman's goal is simple: to make chemotherapy more predictable, more effective, and less harmful for patients. Her way of innovating is about moving science closer to patient care, not just through inventions but by making research more actionable. By helping scientists secure funding, protect discoveries, and build startups, she expanded the definition of innovation to include the systems that bring new ideas to patients faster. Her impact is in building the bridge between research and real clinical change.

Building Future Innovators Through Mentorship

Throughout her journey, Feldman has been guided by key mentors, specially mentioning the leadership team at CU Innovations, including Claire McDonald Ph.D., Gali Baler Ph.D., and Kim Muller Esq. She credits her success to the people who invested in her growth and emphasizes the importance of paying it forward. She mentioned her mentors as "incredible people, who really trained me in a lot of the nitty gritty of what I actually had to do."

Asked what advice she would give future innovators, Feldman is clear: "Don't be afraid to reach out. Every person you look up to has had some help. If you're brave enough to make the first connection, you'll be amazed at how many people want to help."

Lily Feldman now actively mentors students and young researchers, sharing her experiences and helping others find their own path into science and innovation. For her, innovation is not just about discovery. It's about collaboration, community, and the quiet but powerful belief that science, at its best, builds something lasting, not just in labs and clinics, but in the people it lifts along the way.

Student Stories

Building People, Building Solutions: The Journey of Ian Shelton

By Pablo Diaz del Castillo

For Ian Shelton, Ph.D., entrepreneurship is not a side project or an extracurricular; it is how he lives out his scientific purpose. Whether analyzing complex data, collaborating with industry partners, or mentoring students at CU Innovations, Shelton consistently builds impactful solutions, meaningful relationships, and empowers those around him.

A Colorado native with extensive startup experience, Shelton has a career goal of transforming the cancer industry. After completing his PhD in November, he joined RefinedScience as Lead of Therapeutic Asset Development, coming full circle from where his journey began under the mentorship of Dr. Craig Jordan, advancing precision medicine for patients with high unmet needs.

From Clinical Frustration to First Innovation

“I had no money, no experience, or anything to get started, but CU Innovations gave me the opportunity to learn how to come up with ideas and pitch them to the public,” said Shelton. While working on a clinical trial, Shelton noticed that several leukemia patients were experiencing painful infusion reactions. No one seemed to be actively solving the issue, and that frustration led to his first entrepreneurial effort. His idea: a patch to deliver localized medication at the infusion site to reduce reactions as they were happening.

This initiative eventually connected him with Robin Shandas, Ph.D., the chair of the Bioengineering department at CU Anschutz. Shandas encouraged Shelton to pitch the project to a group of master’s students as a capstone client. This marked Shelton’s first experience bringing an idea to life and laid the foundation for how he thinks about innovation today: identifying a real problem, collaborating with faculty and researchers, and pursuing practical, patient-focused solutions. Shelton said: “That was my first real step into entrepreneurship.”

Student Stories

Building People, Building Solutions: The Journey of Ian Shelton

At the same time, Shelton joined the CU Innovations Fellowship program. This program trains students to evaluate startup ideas, conduct market research, and support investment decisions in healthcare and biotech ventures. He helped review potential investments and supported the growth of several startups, learning how to turn research into real-world solutions.

Turning Research into Real-World Impact

Shelton's first venture helped him take the leap to enroll in the biomedical sciences graduate program at CU Anschutz, eventually joining the Pharmacology track. It was in the lab Craig Jordan, Ph.D., was running that would become the home for his Ph.D. research and a turning point in his career. Shelton explained it was “One of the best decisions I’ve ever made. It is tough to even describe it.”

Student Stories

Ian Shelton

At Jordan's lab, they had spent years building a leukemia biobank (a collection of biological samples), and under Jordan's mentorship, Shelton led a major project analyzing patient treatment responses using single-cell RNA sequencing, a method that shows which genes are active or inactive, helping scientists understand how diseases develop.

The lab's findings showed that different types of leukemia cells were linked to drug resistance and relapse. As Shelton became more involved, he learned about a new venture forming around this research. Clinician Clay Smith, MD, and his mentor, researcher Dr. Craig Jordan wanted to create a company that could bring scientific discoveries into clinical care to improve leukemia treatment.

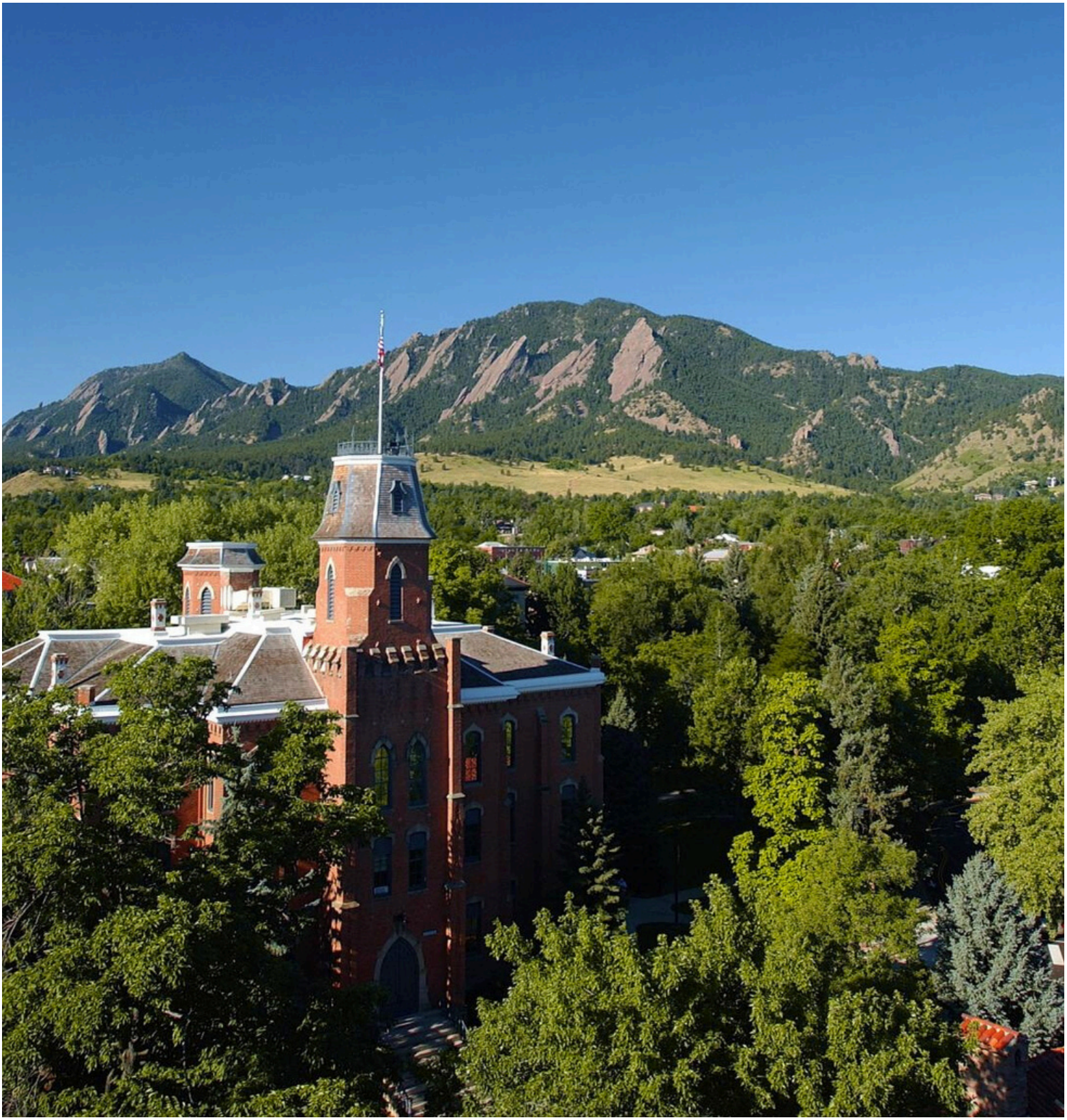
Through this work, Shelton helped identify a group of leukemia cells that the new drug could not completely eliminate, causing some patients to relapse. His team then found an existing FDA-approved drug that could target these resistant cells. When combined with the 2018 therapy, the treatment wiped out both types of cells in lab models, showing a way to improve patient outcomes.

Building a Company Around Patient-Centered Science
In his second year as a CU Innovations Fellow, Shelton was able to officially rejoin the venture that was officially named RefinedScience. The company was built around his team's clinical data, biobank samples, and research tools. The company's strategy focused on using AI and analytics to find existing drugs that could be repurposed to treat difficult forms of cancer. RefinedScience would launch new companies around these discoveries and support them with its data platform.

Shelton played an important role in identifying drug opportunities and designing ways to match treatments to patient needs. By finding new uses for existing therapies, RefinedScience hopes to speed up better treatment options for patients who have few alternatives.
Balancing these roles while completing his Ph.D. was not easy, but it sharpened Shelton's ability to prioritize. He explained: "I learned how to focus only on work that moved my research forward and supported my larger goal," which he mentioned to be helping cancer patients through innovation.

When asked what advice he would give to other students interested in innovation, Shelton says to start by finding a problem that matters to you. "If it's a real, unmet need and you care deeply about it, everything else will fall into place," he explained. Shelton believes that real innovation starts with caring deeply about a problem and finding the right people to help you solve it.

Boulder Stories & Programs



Student Stories

Maithreyi Gopalakrishnan

By May Riley

Maithreyi Gopalakrishnan has been pursuing bold aspirations since middle school, where she dreamt of ideas that were ahead of her time, like solar powered planes. Her journey to success has been intertwined with CU Boulder, where she earned her M.S./B.S. degrees in Engineering Physics. After receiving a second master's degree in engineering management from Stanford and following a stint in industry at Intel, Gopalakrishnan returned to CU Boulder and was empowered by the supportive entrepreneurship community. Now, she is the founder and CEO of PrecisionTerra, launched through the Embark Deep Tech Startup Creator, tested in the NSF I-Corps Hub West, built on tech by Jade Morton (CU Boulder Ann and H.J. Smead Aerospace Engineering Sciences), now a venture-backed CU Boulder spinout improving GPS resilience in signal-challenged environments.

Gopalakrishan's official entrepreneurship journey started during her undergraduate studies, when she helped organize a conference through the Presidents Leadership Class where she started a project on sustainable transportation. She then tested her ideas in transportation during Catalyze CU, a summer-long startup accelerator program. Her goal, helping to reduce pollution in developing countries, led her to develop hybrid conversion kits for auto rickshaws in India. "[Starting a business] was an eye-opening experience and didn't work out in the end, but we learned a lot," she said. While her rickshaw concept didn't end up taking off, it sparked a lasting passion for entrepreneurship, leading her to search for more opportunities in the startup space.

After graduate school and a stint in industry, Gopalakrishnan jumped back into entrepreneurship again through the Venture Partners program and their extensive mentor network. Soon, she was enrolled in their flagship program, the I-CORPS Hub West Research to Market (R2M). "It can be very tempting in business to just keep building your product and doing marketing and all kinds of other things, but ultimately a business is made by customers —the people who are purchasing your product. The fact that Venture Partners really emphasizes that early is so valuable," Maithreyi said. Many of her mentors from the program went on to formally join her company as advisors.

Another key resource in Gopalakrishnan's journey was the CU Boulder Embark deep tech startup creator, which laid the foundation for her company. Through the program, she connected with faculty whose commercializable IP, along with access to startup resources, enabled her to shape a venture around cutting-edge technology. After pitching to a board of judges in 2023, she was selected to license the technology that now forms the core of her company, stepping into the role of CEO to lead it forward.

Student Stories

Maithreyi Gopalakrishnan

As the leader of any founding team, Gopalakrishnan had to work through challenges around communication. During the first year of her startup, the inventor of the GPS technology had gone on sabbatical, so it was difficult to reach out and explore the technical side of the business. “There was no single silver bullet to how I solved that,” Gopalakrishnan said. “It was a lot of leaning on my technical background—reading papers, watching videos and going out and doing interviews to learn about the technology. It was the typical, scrappy, entrepreneurial kind of ways of figuring out how to get my head around it all.”

When facing workplace challenges, Gopalakrishnan said she relies on her de-risking mindset to stay grounded and continue moving forward. “It sounds kind of clinical, but thinking actively about risk gives me the courage to go forward,” she explained. “We, as humans, like to have some level of certainty or structure.” She uses milestones, like raising certain amounts of money, to track the progress of her company and says this makes her confident in her future success. Most recently, she marked a major milestone by winning the 2025 New Venture Challenge and earning $144,000 in support of her company.

Gopalakrishnan works hard to leverage support from her investors and other professional networks. For example, she receives advice from the National Security Innovation network on how to navigate being involved with the Department of Defense. While help from official networks has aided Gopalakrishnan significantly in her journey, the CEO stressed that mentorship has been one of the most valuable forces in her growth as a founder. She encourages aspiring entrepreneurs to go to startup events and meet people organically: “You’ll start to see people who are really excited about and engaged with what you’re doing, and they naturally will be a good fit to be a mentor.”

Challenges have always been part of Gopalakrishnan’s journey, but she’s learned to work through them by reminding herself how her work at PrecisionTerra makes a difference in people’s lives. She stays connected to people who care about her and her progress; a message from someone who’s been helped by something she’s working on or even a quick reply to her monthly newsletter can make her day. "Surround yourself with people who are inspired by what you're doing, are passionate about what you're doing, and really, truly, are invested in seeing you succeed,” she says. That support reminds her that she’s not alone, empowering her to take on the ongoing, constantly evolving challenges of entrepreneurship.

Student Stories

Jesus Soto

By May Riley

On a campus full of students chasing venture dreams, Jesus Soto, a junior at CU Boulder's Leeds School of Business, stands out for a simple reason: he has the ability to help turn those students' dreams into reality. As a scout for Kickstart (a venture fund focused on backing early-stage startups in the Mountain West), he's one of the rare undergrads entrusted with "check-writing power" — the ability to invest in early-stage startups on behalf of a larger organization. Additionally, Soto judged for the New Venture Challenge, helping award a portion of $325,000 to promising entrepreneurs, and founded the Boulder Venture Club, which boasts more than 500 student members and hosts a variety of guest speakers and workshops. These pursuits enable Soto to showcase what he's most passionate about: helping others succeed.

Soto's Entrepreneurship Journey
As a high schooler in Colorado, Soto envisioned ways to support his peers via entrepreneurship.

"Applying to college and getting financial aid is a pain," he said. "I thought it would be cool if there was a platform to help students find local scholarships." With the help of ten teammates and the support of his school district, Soto created Uptrack—a database used to identify and apply for local scholarships.

During his CU Boulder admissions process, Soto was invited into the Leeds EXCEL Scholars Program, a program geared to meet the specific business education needs of students from diverse backgrounds, including students who identify as first-generation and/or low-income. During the three-week intensive Summer Bridge Program, Soto learned about business courses, met with corporate partners and connected with Leeds faculty, staff and students. Upon completion of the Summer Bridge Program, Soto went through an interview process and was ultimately accepted into Leeds.

Participating in the program helped Soto confirm his entrepreneurship aspirations and appreciate his place on campus.

"That was a huge moment of doubt...I kind of felt like, maybe I'm not qualified enough [to be a Leeds student]," he said. "My family immigrated here [from Venezuela], so we didn't come from the best financial means."

Soto shared that he has struggled with imposter syndrome throughout his CU Boulder journey, often feeling unfit to be operating at businesses and venture funds at such a high level. In addition to relying on his family's support to help propel him forward and find the confidence to pursue his dreams, he has found strong support from CU faculty and fellow students.

Student Stories

Jesus Soto

“I just think that there’s no such thing as achieving things by yourself. If it wasn't for Stan and Leah I don't think the Boulder Venture Club would have gone as far,” he said, referencing CU community opportunities, that the I&E Initiative Team supported him in building out the Boulder Venture Club. “Anyone who truly strives to do something better needs some level of support…ultimately that’s what helps you get unstuck when you need to cross a mental hurdle.”

At CU, Soto continued his efforts to support students by founding the Boulder Venture Club, an organization dedicated to fostering a culture of entrepreneurship by providing students of all majors with access to tools, resources and mentorship to pursue their startup goals. Through this hands-on experience with building the Boulder Venture Club (BVC), he came to appreciate the value of being forced to learn on the spot. “I think [knowing what to do] takes away some of the excitement of making mistakes and learning things…Doing something new becomes more of a process and less of an experience,” he reflected.

While founding the BVC, Soto faced some setbacks, noting that the biggest issue was ensuring the club's longevity. To address this, Soto developed a “plan for iteration.” With a clear strategy for adjusting and improving over time, he was able to ensure continued progress and continuity for the group.

Reflecting on his experience, Soto has a deeper appreciation for the innovation opportunities happening all around him. He views entrepreneurship as a way to take ownership and create long-term impact for the people around him, and he strives to continue making an impact in the startup world.
"We sometimes don't realize how many great entrepreneurs [we have] on campus, building really great technologies," he said. “At the end of the day, I do think it's a foundational value of our [campus] community, and perhaps even our whole nation. We all seek to innovate—and I think entrepreneurship is the best form of expressing that.”

Student Stories

Makenna Morc

By May Riley

Q&A: Makenna Morck's Journey in Biotech and Entrepreneurship

With a background in biochemistry, a PhD from Stanford and experience in healthcare consulting, Makenna Morck, an alumnus from the CU Boulder College of Arts & Sciences, brings scientific and commercial expertise to the biotech startup space. Her journey has come full circle: having graduated from CU Boulder in 2014 with a biochemistry degree, she's returned more than ten years later as an entrepreneur in residence. Below, she shares her experiences with entrepreneurship, venture competitions and translating research into real-world impact.

Makenna is a co-founder of CU Boulder startup Kitsune Bio, a Boulder-based biotechnology startup developing shape-shifting cyclic peptides (SSCPs). The company was founded through Venture Partners CU Boulder's Embark Deep Tech Startup Creator, pairing entrepreneurs Makenna and Alec Santiago with technology developed by Michael Stowell (CU Boulder Molecular, Cellular & Developmental Biology).

Q: Tell us about your current company.

A: We're trying to find drugs to treat the most challenging of diseases. There are many cases in which we know the underlying cause of a disease but haven't yet been able to find a drug that can effectively target it. Essentially, this is because there are trade-offs in the way we develop drugs. Antibodies and small bodies are limited because they can only take on a single shape and it would be advantageous [KR3] if there was a drug that could fold and unfold. It would be able to do things that small molecules can do and things that antibodies can do, allowing us to target diseases that no one's been able to develop drugs for yet.

We use cyclic peptides to target molecules that are typically difficult for conventional drugs to reach. We link these peptides using bullvalene, a molecule with no fixed shape. This inherent flexibility gives the peptides a shape-shifting ability, allowing them to bind to complex targets, penetrate cells, and potentially be delivered in the form of a pill. With this technique, we're able to address the limitations of traditional drugs.

Student Stories

Makenna Morc

Q: What was the journey to become an entrepreneur like?

A: During my undergraduate studies at CU in biochemistry, I started working at a lab. I loved it from day one, and that drove me towards a PhD, which I completed at Stanford University.

During my PhD, I worked on developing drugs. I love working in the lab, and I love science, but one of the things I learned was that in order for science to become something that actually impacts people's lives, it has to go through the commercial pathway. At some point, I realized I didn't just want to be the person holding the pipette anymore. I wanted to be more on the business/entrepreneurial side of biotech.

I spent three years working in healthcare consulting, working with pharma companies on problem solving. It was always meant to be a short-term thing—and I've always loved Boulder—so I ended up back in Colorado and got into entrepreneurship.[4]

A friend and fellow CU alum ended up connecting me to the Embark program at CU. Embark connects entrepreneurs with professors and patents, allowing them to utilize IP rights to commercialize their technology. It allows someone like me, an entrepreneur who has the skill set to help someone start a company, and understand how to turn science into something that will have commercial potential. The support the program is providing through the partial fellowship and the tech development grant creates a really fertile environment for a company to grow.

Q: What helped kick off your venture?

A: We pitched at the Lab Venture Challenge (LVC) in the Fall, and we had only been working on the company for a few months at that point. We also participated in the 2025 New Venture Challenge (NVC) and won the 2025 Women Founders Competition. The pitch competitions were a good way for Venture Partners to assess our technology, marketability and team. This helped us hone our pitch and connect with lawyers to establish the entity and begin the licensing process. It's great for a first-time entrepreneur like myself. We ended up winning both the LVC and the Women's Founders Competition, and were semifinalists in NVC. Between that and other pockets of support, we have a million dollars of non-dilutive funding right now, and it's very exciting!

Q: Are there any lessons learned that you are taking away from this experience?

A: Perfectly polished ideas don't cross your desk that often, so learning how to take something that's not one-hundred-percent ready and turn it into something that is viable is an amazing lesson. It's tough, but that's what it takes to start a company. I've learned a lot about being willing to put myself out there. I get nervous when I don't think an idea is totally ready, and my co-founder is the one who says, 'It's okay, it doesn't have to be perfect. People will either see the vision or they won't.' There's no downside in saying, 'Here's our idea, what do you think?' Having those conversations helps us understand what direction to go in, as a company. Sometimes we learn the most from being willing to step out on a ledge a little bit.

Q: Who's been helpful in supporting your journey?

A: Everyone at Venture Partners has been great to us. We've also received support from those running the Ascent Accelerator program, which we really enjoyed participating in. We've had multiple mentors with years of experience in the founder space, and it's been incredibly helpful to hear from somebody who has that experience and can give us feedback on our pitch and on how we can better sell. In Boulder, it's definitely a rising tide lifts all ships situation–everyone is so willing to help other people.

Student Stories

Makenna Morc

Q: What advice do you have for other aspiring entrepreneurs?

A: First, it's always easy to find reasons not to start a company. When I left consulting, I spent several months toying with the idea of starting something, but I kept telling myself, "I'm not an inventor, so how would that ever work for me?" I realized that you don't need to be the inventor to start something meaningful—you just need to think creatively and be open to different ways of getting started. The Embark program also takes away some of the risk involved; it allows aspiring entrepreneurs to pursue a business idea using technology that has already been tested, de-risking the process.

Now, on the flip side: if you do want to start a company, one of the best things you can do is to invest in yourself. Over the last 10 years, I've spent a lot of time upskilling and putting myself in a position where I feel confident leading something forward. For me, that meant getting a PhD and it was incredibly valuable in helping me deeply understand the biotech space. My time in healthcare consulting was also crucial because it gave me insight into both the scientific and commercial sides of the industry.

So, there's this balance of not wanting to get stuck thinking "I'm not ready yet" forever, but at the same time, you are trying to keep building the skill sets you know will be valuable. And then, when the right opportunity comes along, you're prepared to jump on it.

Colorado Springs Stories & Programs

Student Stories

Building the Next Generation of Cybersecurity Experts: Robert Drone's VR Mission

By Pablo Diaz del Castillo

The cybersecurity industry needs people, and fast. With almost half a million unfilled jobs in the U.S., the industry faces a growing gap. Robert Drone is building solutions, even though he doesn't consider himself an innovator. "I'm just doing what I love," he said. He's developed a virtual reality cybersecurity demo used to engage K–12 students. This "game" is already changing how young people discover the threats and opportunities in our digital world.

From Curiosity to Code

Drone is a senior in the Bachelor of Arts in Cybersecurity program at the University of Colorado Colorado Springs. Long before stepping into a college classroom, he was already immersed in the world of cybersecurity, teaching himself online, reverse-engineering code, and building open-source Android operating systems in high school, and now having over 10 years of experience in the field.

"I've always been drawn to how things work, and how they break," he said. "Cybersecurity is basically that. You break something, figure out how it was broken, and either fix it or help someone else understand it."

He has been heavily involved in the student cybersecurity clubs in college. He has been serving as president of the Mountain Lion Cybersecurity (MLC) student club at UCCS. His main goal in this role has been to give other students access to hands-on training that most classes can't fully provide. "What we do in the club is connect students to real-world scenarios and professional networks," he said. "That's where you really grow."

Making Cybersecurity Click

That same mindset, making things real and tangible is what led to the creation of VR Tech, a virtual reality game designed to introduce students in grades K–12 to the broad range of careers in cybersecurity. The idea started about three years ago, when Drone and the cybersecurity program at UCCS began exploring ways to make cybersecurity more engaging for younger audiences. The result is part simulation, part exploration game, to get students hooked on cyber and avoid common misconceptions. The cybersecurity program at UCCS is the first in Colorado to earn the NSA's elite Center of Academic Excellence in Cyber Research designation, putting it on the national map for cutting-edge PhD-level cybersecurity research and workforce development. The cybersecurity program

Student Stories

Building the Next Generation of Cybersecurity Experts: Robert Drone's VR Mission

at UCCS made the university not only the first one in Colorado to earn the National Security Agency's top cybersecurity research designation, but it also leads the nation in cybersecurity education and outreach, earning back-to-back national awards for programs that engage students from kindergarten to PhD.
"A lot of kids think cybersecurity is just 'hacking', typing fast on a keyboard in a dark room," Drone said. "But it's not. It's business. It's psychology. It's defense. It's everything."

The game drops students into a mock workplace and lets them explore different cybersecurity roles. Drone explained: " There could be a game where students are essentially dropped into some new job role and they're tasked with going around the building and they're put in the role of different people from a cyber security perspective. There's a lot of interactive things that students can do that keep them engaged."

The goal is to show that cybersecurity isn't just about computers; it's about people and systems. "We wanted to build something engaging but real. Something that says, 'Hey, you could do this,' and gives students a full picture of what 'this' actually means," Drone said.

The project now functions as a demo used by UCCS outreach teams in local schools. Middle schoolers have been the primary audience so far, but Drone hopes to expand to high school partnerships next.

Why This Matters - Protecting the Future Starts Young

The need for cybersecurity professionals is urgent. As of early 2025, there were over 450,000 unfilled cybersecurity jobs in the U.S. and over 16,000 in Colorado alone. Every week, new breaches are reported in healthcare systems, financial institutions, and schools. Many Americans, Drone pointed out, have likely received at least one letter in the mail explaining that their personal data was compromised due to a corporate failure. This problem could be avoided if there were enough people in cybersecurity.

"Infrastructure touches everything," he said. "Cybersecurity isn't optional anymore. It's in hospitals, schools, city governments, even how you protect your photos or your bank account."
That real-world impact is part of why Drone is so passionate about helping students get involved early. And he's not doing it alone.

Student Stories

Building the Next Generation of Cybersecurity Experts: Robert Drone's VR Mission

Throughout his journey, Drone has benefited from a network of mentors. "I feel incredibly lucky," he said. "They are all leaders and experts, they've given me the support I needed to feel confident in my future." He credits April Frost and Terri Johnson, both of whom mentored him through college. At UCCS, he found guidance from Gretchen Bliss, who is the director of Cybersecurity Programs at UCCS, and has helped him navigate both professional development and future planning. Other mentors, like Sully (Serena Sullivan), Ph.D., have provided deep technical training and helped him prepare for vital certifications needed in the cybersecurity field.

Drone is now focused on sharing his passion with younger students and making sure that more people understand what cybersecurity actually involves. He shared his advice to fellow students: "Start with passion," he said. "If you care about something, learn how it works, then start looking for problems. Every field has gaps that need to be filled. Find yours."
For Robert Drone, the gap was clear: cybersecurity education wasn't reaching enough students So he built a new way in, because he knew the stakes were too high not to.

Student Stories

Wild Pup & Co.: How Alexes Hernandez Turned a Messy Problem Into a Mission

By Pablo Diaz del Castillo

When Alexes Hernandez moved from New Mexico to Colorado Springs in 2020, college was the plan, but she didn't expect to become a business owner with a growing online following. But a simple frustration with expensive dog bandanas turned into something much bigger. With support from UCCS entrepreneurship resources, her business now reaches thousands across TikTok and Instagram. Now a senior, she balances classes, custom orders, pop-up markets, and a part-time job, showing how student entrepreneurship can start with a simple idea and grow into something that inspires far beyond campus.

"I've never felt like an innovator. I'm just a girl making bandanas and having fun — but every once in a while, I step back and realize, wait, this is actually something." — Alexes Hernandez, Senior at the University of Colorado Colorado Springs

Fixing One Problem, Supporting Many Pups

Alexes Hernandez's journey began with a personal frustration: expensive, low-quality cotton bandanas. As a high school student on a budget, she loved dressing up her dog but found that cotton bandanas were overpriced and easily ruined after one wear. "They'd get wrinkly, muddy, and basically fall apart," she explained.

Hernandez started sewing her own. But it wasn't until years later, after volunteering at the National Mill Dog Rescue, that the idea sparked into a real business. "I wanted to help, but I didn't have the money to donate. So I thought, why not start a business and give part of the proceeds to dog rescues?" she said. In October 2024, Wild Pup & Co. officially launched, with 10% of every sale going to a different dog rescue each month. Joining The Garage at the University of Colorado Colorado Springs gave Hernandez the support system she didn't even know she needed. The Garage is an entrepreneurial hub, part of the Center for Entrepreneurship on campus where students meet regularly, set business goals, and work with dedicated mentors to refine their ideas. "It's easy to get stuck in your own head," Hernandez said. "The Garage gave me outside perspectives that helped me think about my business in ways I wouldn't have on my own."

Student Stories

Wild Pup & Co.: How Alexes Hernandez Turned a Messy Problem Into a Mission

When choosing her materials to design her products, Hernandez sourced a polyester-based fabric that was lightweight, stretchy, durable, and easy to clean, it was perfect for active dogs. "I tested it myself, I got it muddy, let it dry, washed it, and it came out perfect," she said. She also reimagined the classic triangle shape of dog bandanas. Her designs feature small "wings" that make them easier to tie and snap securely around a dog's neck, ensuring they fit both small and large breeds comfortably without overwhelming their frames.

Wild Pup & Co. grew quickly, especially on social media. Hernandez built an audience around her products, sharing videos of her bandanas surviving mud tests and featuring adorable customer dog models. A recent TikTok post offering discounted products to dog owners willing to model their pets generated over 20,000 views and more than a hundred comments. "People are actually following my stuff," she said. "It's crazy to think something so small turned into something people are excited about." That blend of excitement and self-belief fuels everything she does. As Hernandez puts it: "If you like it, just do it. Nobody cares what you're doing, so just do it." It's an attitude that perfectly sums up her fearless dive into entrepreneurship, blending passion, practicality, and a sense of fun into everything she builds.

Making It Work, One Bandana at a Time
While her brand grows, Hernandez stays grounded. She reinvests every dollar into Wild Pup & Co. or donates it, she hasn't paid herself yet. Balancing 19 credits, a close-to full time job, and business events isn't easy, but she embraces it with her stress-free personality.

This summer, Wild Pup & Co. was accepted to be a part of Territory Days, the largest annual event in Colorado Springs that draws over 100,000 visitors, Hernandez is racing to build up her inventory while finishing her finals. She has also been booked at multiple dog adoption events, brewery pop-ups, and summer markets, an impressive milestone for a young company and a young entrepreneur.

Despite the challenges, Hernandez's focus remains simple: help dogs, make meaningful products, and have fun doing it. She credits much of her success to the support of her mentors at UCCS, her family and friends. "They act like it's nothing, but I know they really believe in me," she said. Hernandez shared her advice to fellow student innovators saying: "Just go with the flow. Don't overthink it. If you have a passion, follow it, because you never know what it can turn into."
Even though she doesn't call herself an entrepreneur, Alexes Hernandez is exactly that. Through creativity, compassion, and a bit of trial and error, she's found a way to turn her passion for pets into a business with a purpose, and she's just getting started.

Student Stories

Wobbleless: How a Skateboard Crash Sparked a Startup

By Pablo Diaz del Castillo

Sometimes innovation comes from falling... literally. For Nicholas Ramirez, a wipeout on a skateboard wasn't just a painful moment, it was a spark. It eventually led him to create Wobbleless, a startup rethinking how skateboards can be made safer, steadier, and smarter. "If nobody else is going to do it, why not me? You have to start — or you'll always wonder 'what if.' " — NicholasRamirez, Sophomore at UCCS

Growing up in the small town of Hallettsville, Texas, Ramirez learned early about hard work and community. In high school, he even launched a small construction business with the help of a local mentor, juggling projects and learning the basics of business, taxes, and networking.

Finding a New Path at UCCS

But after realizing construction wasn't his long-term future, Ramirez knew it was time for him to push himself and do something different, in his case, he left home and took a risk. That's what brought him to the University of Colorado Colorado Springs, where he joined the The Bachelor's of Innovation program, never having been to Colorado before, Ramirez explains: "I wanted to see if I had what it took to build something completely new," he said. "The Bachelor's of Innovation sounded like a place where I could grow real skills, not just sit in a classroom."

Ramirez's major focuses on entrepreneurship, and it turned out to be the perfect fit. From day one, he immersed himself in UCCS's entrepreneurial ecosystem, including The Garage (a program part of the Center for Entrepreneurship at UCCS), which is a dynamic community where student founders meet mentors, set goals, and pitch their ideas.

His big idea, Wobbleless, came from personal experience: a mechanical device that acts like "training wheels for skateboards", helping riders stay stable and avoid dangerous wipeouts caused by speed wobbles. Traditional skateboards, he realized, hadn't changed much in 100 years. "It frustrated me that nobody had even tried to solve the problem," Ramirez said. "So I thought, if nobody else will, why not me?" This idea could potentially save lives and keep skaters off hospitals.

Student Stories

Wobbleless: How a Skateboard Crash Sparked a Startup

Turning Ideas Into Action

The resources at UCCS played a crucial role in turning Wobbleless from an idea into a real venture. From his innovation classes, faculty mentors connected him to industry professionals, from skateboarding experts to engineers, who helped him navigate challenges like materials selection and manufacturing costs. "I've had professors introduce me to people who skateboard, people who work in engineering, even people who work in patents," he said. "They weren't just teaching, they were helping me build real connections."

When he needed advice on patents, Terrance Boult, Ph.D., a UCCS faculty member, personally connected him to a patent lawyer. Today, Wobbleless is officially patent-pending, a milestone Ramirez says he never could have reached without CU's support network.

Meanwhile, The Garage gave Ramirez a platform to grow his idea further. Through pitch competitions, feedback sessions, and mentorship meetings, he refined his designs, shifting from early 3D printed prototypes to plans for lightweight versions built from brazed aluminum and delium rubber. "I had a rough patch where I was swamped with school, work, and development, and I started to doubt everything," Ramirez recalled. "But then I pitched again at The Garage, and the encouragement and constructive feedback I got (from the UCCS Entrepreneurship community) completely reignited me. The community here genuinely lifts you up."

Today, Wobbleless is in the final stages of research and development. Ramirez has built connections with local skate shops, started gathering feedback from riders, and is working toward launching an early product version within the next two years. While not yet generating revenue, Wobbleless is quickly evolving and its founder is more determined than ever.

Balancing the Grind and the Dream

Ramirez's days are packed. He balances full-time classes, a campus job driving shuttles, and endless hours of business development. Most of his mornings are spent answering emails, practicing pitches, scheduling meetings, and 3D printing parts before heading to work. Late nights are for fine-tuning ideas and dreaming up next steps. "It's a grind," he said. "But getting to create something out of nothing is worth every minute."

Looking back, Ramirez credits UCCS and CU's entrepreneurial programs with giving him the courage and the tools to chase his vision.

"The professors, The Garage, the Bachelor's of Innovation - without them, I wouldn't be here. I would've never even started."

Even though he's only getting started, Nicholas Ramirez already embodies what it means to be an innovator: a willingness to risk, to listen, to learn, and most importantly, to act. Wobbleless isn't just a product, it's a symbol of what's possible when students have the right ideas, the right support, and the courage to take the first step. Ramirez advises fellow students: "Don't be scared to fail. You'll learn faster by doing than by waiting for the perfect moment. Just start. You'll figure it out as you go."

Denver Stories & Programs

Student Stories

Threading Hope: Rahma Diallo's Work to End Côte d'Ivoire's Blood Crisis

Interview with Rahma Diallo

Originally from the close-knit, sun-soaked community of Côte d'Ivoire, Rahma Diallo came to the U.S. for her studies, transferring from Temple University to CU Denver to complete her degree in communications and be closer to family. That move gave her academic opportunity, a sense of belonging, and the chance to grow her organization File l'Espoir. Today, she's pursuing a Master's in Entrepreneurship to build on that momentum.

Tell me about your company, what does it do, and what inspired you to start it?

"File l'Espoir is a mission-driven organization I founded in Côte d'Ivoire, West Africa to tackle one of the country's most urgent public health crises: blood shortage. We raise awareness about the importance of blood donation, mobilize young people and communities, and organize blood drives.

I'd witnessed the issue many times growing up, including when my aunt died after childbirth because the hospital didn't have the blood she needed. But what truly triggered me to act was a news story I came across in January 2022. It was about a 4-year-old boy named Miracle who died of malaria-induced anemia because the hospital couldn't find blood in time.

That's why I launched File l'Espoir: to build a future where stories like Miracle's are no longer possible.

File l'Espoir, read "Feel Less-pwhar," means "Thread Hope" in French and symbolizes blood as the life thread which has the power to connect people and save lives."

They are doing just that. In just three years, File l'Espoir has helped save over 1,200 lives in Côte d'Ivoire by rallying youth and communities around voluntary blood donation, supported by a growing network of 500+ dedicated volunteers, donors, and partners. Despite working unpaid, their team brings relentless energy and belief in our mission, fueling real change. Testimonials like that of Maïmouna Fondio, a sickle-cell patient who credits her survival to their very first campaign in 2022, remind them why this work matters. Their efforts were nationally recognized in June 2024 by the Ministry of Health as one of the country's leading organizations tackling the blood shortage.

Student Stories

Threading Hope: Rahma Diallo's Work to End Côte d'Ivoire's Blood Crisis

You wear a lot of hats, how do you juggle academics, running a company, and any tips on how you do it?

"I enjoy the challenge and variety that come with juggling multiple responsibilities. I'm not a fan of routine, so filling my days with different tasks and projects energizes me. That said, it's not always easy. I don't think perfect balance exists, and I've made peace with that, but I do my best to stay grounded through structure and discipline, especially on the days I don't feel motivated."

What role has CU Denver played in your journey?

"CU Denver has been huge for me, especially the Jake Jabs Center for Entrepreneurship. Competing in the 2023 CLIMB competition was a turning point. I won Best Healthcare and Mission-Driven awards, which opened so many doors. The center connected me to mentors, funding opportunities, and a community that believed in my mission. It inspired me to pursue an MS in Entrepreneurship so I could sharpen my skills and better scale File l'Espoir."

Who's been in your corner during this journey?

"I've been blessed with an amazing support network, but MP, the director at the Jake Jabs Center stands out. His mentorship pushed me to become a better speaker, think more clearly about my strategy, and level up my marketing game. His belief in me has made a huge difference."

What advice would you give to other students thinking about starting something of their own?

"Start. Even if it's not perfect and even if you feel like you don't know enough yet. Clarity comes with action. The more you move, the more the path unfolds and the more confidence you gain.

It's easy to think that you need all the answers upfront or that you have to wait until you're more experienced, more connected, or more "ready." But the truth is, you grow as you build and that's the beauty of it. And the earlier you start, the sooner you'll realize what works, what doesn't, and what really matters to you. Also, don't underestimate the emotional weight of this journey. It can feel lonely and vulnerable. Surround yourself with people who remind you why you started, and don't hesitate to lean on them. And always stay rooted in your mission, that's what will keep you going when everything feels hard. You got this!"

Rahma's journey shows how one determined leader can turn scarce resources into lasting impact.

Student Stories

From Spa Table to Startup Podium: How Brittany Guzmán Taylor Is Rewriting the Rules of Inclusive Skincare

When Brittany Guzmán Taylor, a current MS in Entrepreneurship student, opened Limn Skincare in a one-room Denver studio in 2016, she saw the same frustrating pattern every day: clients with deeper skin tones and pregnant clients of every complexion were forced to choose between safety and results. “The industry treated them like edge cases,” she recalls. “I wanted treatments that worked for everyone.”

Nine years later, her holistic facial spa boasts a 5-star Google rating, a 2,500-person client list, and an esthetics team known city-wide for melanin-safe, pregnancy-friendly care. Yet founder’s most disruptive move came this spring on the campus of CU Denver.

While pursuing an M.S. in Entrepreneurship, Guzmán Taylor transformed customer pain points into a product: Anchora, an at-home micro-channeling treatment that delivers melanin-safe, pregnancy-approved activities through sea-sponge “spicules.” The skincare product brightens hyperpigmentation, softens scars, and calms sensitivity without the risks of burning or bleaching, which are even more pronounced in deeper complexions.

Anchora’s debut at CU Denver’s 24th-annual THE CLIMB Startup Pitch Competition clinched first place and a $10,000 check, impressing judges drawn from Denver’s deal-maker circuit. “My biggest hurdle was believing my idea was worth sharing,” she said in an interview. “Entrepreneurship classes helped me pressure-test the concept, and THE CLIMB turned a daydream into a go-to-market plan.” CU Denver Business School News

The win unlocked pro-bono IP counsel, manufacturing intros, and a Jake Jabs Center mentor network. It also marks a full-circle moment for Guzmán Taylor, a recipient of CU Denver’s Displaced Aurarian Scholarship, which supports students whose families were uprooted when the Auraria neighborhood became a campus in the 1970s.

Next up: work with cosmetic chemists and black-owned cosmetic distribution centers based in the US, an e-commerce launch slated for early 2026, and a retail pilot in her existing spa, Limn Skincare & Massage. Investors in clean beauty and inclusive wellness are already circling. “When skincare is melanin-safe, it’s safe for everyone,” she says. “That’s not a niche; that’s the market.”

If her trajectory is any indication, the next household beauty brand won’t come from a Paris lab or Silicon Valley algorithm; it’ll spring from a Denver spa where every shade, stage, and story gets the same glow-worthy chance.

Student Stories

Reclaiming the Rubble: The Innovative Vision of CU Denver Alumni Maslin and Olive

By Daniel E. Gonzalez Pinto

A shared passion for sustainability, kindled within the architecture studios of the University of Colorado Denver, has led alumni Maslin and Olive to confront the global challenge of waste tires. What began as a master's thesis in Julee Herdt’s sustainable design studio and lab has evolved into a dedicated mission, demonstrating how academic exploration, collaborative spirit, and professional expertise can drive tangible environmental change.

Maslin and Olive were working full-time as architectural designers while pursuing their master's degrees, and they quickly found common ground.

"We realized we were aligned in so many ways and our passion for just making a change within the industry and with the environment," Olive recalled.

Their "tire project" was born from a thesis prompt that challenged them to design an architectural product from either biomass or a societal byproduct. As they began their research, their focus turned regional. They discovered that just northeast of Denver, in Hudson, lies a landfill they refer to as "Tire Mountain." According to their research, it is "actually the largest tire monofill in the United States." This local discovery revealed a global crisis. "It is a huge issue locally," Maslin explained, "but also as we started to do our research, we realized that this is so much bigger than the local issues that we were addressing in our studio project."

The project received "a lot of really great feedback," according to Olive, and after being featured in a local Denver news story, the duo was inspired by the public interest. They realized their idea could "transcend beyond just like an academic concept." Despite the demands of their careers, they have continued to dedicate their personal time to the project, driven by a commitment to find a viable solution.

The core of Maslin and Olive's mission is to divert waste tires from landfills, where they can contribute to toxic fires and environmental damage, and repurpose them into valuable, sustainable materials for the construction industry. Their initial concept focused on creating recycled rubber building cladding, an innovative take on existing recycled rubber roofing shingles.

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Since graduating, however, their focus has broadened from a single product to a wider advocacy for a circular economy. They aim to challenge the industry standard of using new rubber when, as they explained, there is an "abundance of existing rubber that could be recycled." They envision a future where specifying sustainable materials is standard practice. "If we can have this positive impact and the ability to specify a product that is low carbon or carbon neutral or even carbon negative," Maslin stated, "is really exciting." Their work is about fundamentally rethinking the lifecycle of materials in an industry known for its waste.

Bringing their vision to market has been a journey fraught with challenges. The primary obstacle, they explained, has been gaining access to the resources and machinery needed to create a physical prototype. "The most limiting thing about our idea is the availability of the material in the shape that we need it to be or in the size that we need it to be," Olive noted. The large-scale production lines are not set up for the small-scale prototyping they need to do, and finding partners has been difficult.

Despite the hurdles, their persistence is yielding results through research and networking. They have built crucial relationships with local industry figures like Teresa Emo at Colorado Tire Recycling and Richard Well of Rubber Erosion, who is actively creating recycled rubber products for utilitarian purposes. These connections provide invaluable insight and potential avenues for collaboration.

Their journey has been a cycle of relentless effort and adaptation. "It's been our whole journey," Olive said. "I feel like we've hit so many walls, but it hasn't discouraged us... we have been told no so many times by so many people where we have to keep evolving our idea until someone is willing to help us take the next step." This resilience and willingness to pivot has been the key to their continued progress.

Maslin and Olive's story is a powerful testament to the impact of applying academic passion to real-world problems. Supported by mentors like Julee Herdt and programs at CU Denver, they have carried their educational foundation into their professional lives, seeking to innovate from within. Their work inspires a necessary shift in perspective, viewing massive waste streams not as problems to be buried, but as opportunities to be reclaimed.

Their ultimate goal is to see a thriving market for products made from waste tires, thereby reducing the environmental strain of monofills and promoting a healthier, circular economy. Their endeavor is defined by a refusal to accept the status quo, encapsulated by a simple question that drives their work. As Olive powerfully stated, "We're asking the challenging questions of why couldn't this issue be implemented into the industry that we're in?

Student Stories

Bridging Disciplines, Building the Quantum Future: The Vision of CU Denver's Austin Long

By Daniel E. Gonzalez Pinto

For Austin Long, a PhD student at the University of Colorado Denver, a simple but profound question set the course for his academic and professional life. While finishing his mechanical engineering degree, "I began asking myself where the future of technology was headed and came across the field of quantum computing and information."

This question launched a 17-year journey through multiple disciplines, from engineering to physics to computer science, and positioned him at the forefront of a technological revolution. His story is an example of how interdisciplinary curiosity can build a bridge between the theoretical and the tangible.

Long's academic path was methodical. He earned a bachelor's in Mechanical Engineering and a master's in Physics from California State University, Northridge, before enrolling in the Computer Science PhD program at CU Denver. This diverse background was intentional. "This motivated me to pursue an education in fields of physics and programming," Long stated, reflecting on his desire to understand technology from the ground up.

His passion for making complex ideas accessible is evident in his extensive teaching career. Long has taught undergraduate physics and, in a role teaching children to program, used Lego Mindstorm devices to demonstrate how code translates into physical action. This hands-on approach reflects his core belief that "everything that we see is built by things that we do not see. Every object starts off as just an idea." This philosophy—that imagination grounded in strong fundamentals can become reality—is the bedrock of his work in the quantum field.

Student Stories

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Long's primary mission is to help transform quantum mechanics from a purely academic subject into a practical, industry-shaping force. He views the Quantum Information certificate program at CU Denver as a critical component of this effort. He describes the program as a "pathway to take everything I have learned and develop workforce related approaches to something that is often seen as abstract and theoretical."

He believes the field's advancement depends on breaking down silos. In his view, the certificate program is a vital resource for professionals from varied backgrounds to gain the necessary experience. More than just a personal stepping stone, Long sees the program as a solution to a larger industry need, creating a "pipeline to introduce a broader range of knowledge" essential for the field to grow. He champions the idea that the quantum workforce requires a spectrum of expertise. "All knowledge is theoretical until it is applied," Long argues, "and all levels of each scientific field are needed when working with quantum technology... without the engineers to design and the trade skills to build, the research is just a thought."

According to Long, progress in a field as complex as quantum is impossible without teamwork. "Collaboration is essential in any science and engineering field," he affirmed. He credits mentors like CU Denver's Martin Huber for their "passion for the advancement of the workforce development for the industry" and values the "like-minded" peers in his program who come from different disciplines.

Looking ahead, Long sees quantum technology as more than just a promising field; he calls it an "exciting and inevitable way forward for science and technology." He is particularly energized by its potential to solve complex problems in chemistry and biology, leading to breakthroughs in medicine and materials science. He paints a vivid picture of the future, where quantum computation could allow us to develop materials for "stronger and lighter spacecraft to allow for further travel, or the development of a new fuel that is more efficient."

Crucially, Long pairs this excitement with a call for ethical stewardship, emphasizing that when these powerful new tools are "used responsibly, [they] can help progress the world forward."

Austin Long's journey illustrates that the future of technology is being built at the intersection of diverse fields. His path demonstrates a commitment not only to his own education but to creating pathways for others to enter this revolutionary space. By grounding his ambitious vision in a strong foundational knowledge and a collaborative spirit, he is helping to ensure that the abstract ideas of today become the world-changing innovations of tomorrow.

Thanks!

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