Bright Past, Brilliant Future: A Year in Review with Dean James James Bullock

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UCI is ranked #8 among public universities nationwide by U.S. News & World Report.

MONEY magazine ranked UCI #1 best college in the nation.

#1 in Sierra magazine’s ranking of the most environmentally sustainable schools.

#1 on Forbes magazine’s list of America’s Best Value Colleges.

The New York Times ranks UCI #1 in the nation doing the most for the American dream.

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Departments under UCI Physical Sciences — Chemistry, Earth System Science, Mathematics, Physics

166

Faculty members part of UCI Physical Sciences

3300

Students in UCI Physical Sciences
Legacy of Growth and Success

Building on a long tradition of success in education and research

- Two Nobel Prizes
- $60 million in research funding in 2019
- Distinguished faculty honored by multiple organizations

- Select areas of growth:
  - Quantum Science – Physics/Chem/Math
  - Climate Change – Solutions that Scale
March 2020: Landscape of Higher Education Drastically Changes

Covid-19 Impact on Faculty, Students, and Research

**Faculty**: Learning to teach remotely; Navigating research
**Students**: Adapting to remote delivery
**Research**: Standards for laboratory safety
Our Faculty

- Required remote delivery e-course for all instructors
- Established “Remote Teaching Task Force”
  - Experienced faculty creating “best practices” protocol to ensure that all faculty can deliver remote instruction
- Development of teaching pedagogy class requirement
Our Students

- Setting a standard in education delivery
- Ensuring access – i.e. recorded lab demos, faculty mailed experiments
- Graduate housing COVID-19 resident testing program
Our Research

- Physical Sciences leads campus in COVID-19 laboratory and research safety
  - Stringent Covid-19 protocols in place
  - Working at 30% capacity in labs
  - Contact tracing program
On the front lines: COVID19 Research

**Physicist uncovers laser technology that could take the teeth out of COVID-19's grip**

When Chris Barton turns his mind on something, it is with laser precision. The UC Irvine Distinguished Professor of Physics and Astronomy learned from an early age he was driven to seek after...

**UC Irvine Lab makes coronavirus-crippling molecule, a first step toward a new drug**

A team of UC Irvine chemists have created a molecule that acts as a false key to lock onto an enzyme needed by the coronavirus to reproduce. The recently announced discovery could be an important...

**Ending coronavirus lockdowns quickly can be more costly than relaxing them gradually**

Irvine, Calif. — June 3, 2020 — "We're all in this together" is a commonly heard phrase during this global pandemic, as much of the world practices social distancing. And now researchers at the University of California, Irvine and other institutions have shown that...

**Finding effective face mask fabric for DIY protective coverings - "Bandanas useless"**

The air that pours into your lungs when you breathe travels, on average, of about 10 centimeters a second. But if often not just as you're breathing. There can be dust, pollen, and other irritants in air, and now, wearing masks the droplets that people emit when they cough and sneeze and talk, there can be the...

**Coronavirus and climate change**

As the pandemic rages, Department of Earth System Science Chair Eric Pugh defines what coronavirus means for climate change and those who study it...

**Bacteria self-quarantine, too, and this ability is helping UCI researchers develop a treatment for coronavirus**

Professor Albert Snyder couldn't have known it, but research he and a team of scientists published last year in September would, just a few months later, position him and his lab to...

**UCI Faculty create curricula for kids worldwide confined by coronavirus**

Irvine, Calif. — April 22, 2020 — On this Earth Day, the United Nations is announcing the start of a new environmental education program for the world’s 2.3 billion children who are confined to their homes to prevent the spread of COVID-19 and unable to physically attend school.
Embracing Diversity & Inclusion Efforts

Racial Justice at the Forefront

- Create Outreach & Inclusion Office
  - Goal is to create *Access* into our community; *Outreach* to underrepresented communities; represent *Inclusion* within our community

- Alignment with *UCI Black Thriving Initiative*
Towards a more diverse & inclusive faculty

- Advancing Faculty Diversity Initiative
  - UCOP Grant awarded to school in 2019

- Faculty: 40% women, 20% URM; 2% Black

- Increased diversity in faculty hiring
  - Faculty onboarding process to include implicit bias training
  - Faculty mentoring program
    - Collegial code of conduct
Our Students

- Creating sense of community for students
  - Peer mentoring (i.e. PACE)
  - BLM and Diversity mixers, townhalls, reading groups
  - Emphasis on closing the achievement gaps in STEM

- Collaborating with Schools of Engineering and Information & Computer Science
  - Recruit from HBCU’s & CSU’s
Research

- Diverse faculty hiring will lead to more diverse laboratory groups
- Onboarding protocol for implicit bias and how to run an inclusive laboratory
The Future of Physical Sciences
The Future of Physical Sciences

- Education
- Culture
- Funding
- Research
Physical Sciences Moving Forward........

- While remote learning is not ideal, we are learning how to enhance curriculum delivery that will benefit everyone in the school
- Continue to focus on culture & diversity as a priority
- Research continues to progress
  - COVID-19 research thrust
  - Climate Change solutions
  - Eddleman Quantum Institute
- Creation of Dean’s Executive Cabinet, our school’s premier advisors
Dean’s Executive Cabinet

Michl Binderbauer  Julie Hill  John Gerace  
John Evans  Andy Policano