



METROPOLITAN
STATE UNIVERSITYSM
OF DENVER

SMART Act Presentation

SB18-086 Cyber Coding Cryptology For State Records



COLORADO MESA
UNIVERSITY



COLORADO STATE UNIVERSITY
SYSTEM

Colorado State University • Colorado State University-Pueblo • CSU-Global Campus

*Joint Business Committee
Presentation*



PIKES PEAK
COMMUNITY
COLLEGE

January 21, 2022



WESTERN
COLORADO UNIVERSITY



University of Colorado
Colorado Springs

University of Colorado Colorado Springs

- In partnership with the NCC and Space ISAC, UCCS has consistently exceeded legislation 15% scholarship requirements by 8%
- Almost 200 UCCS undergraduate and graduate students with cybersecurity degrees are working in industry
 - Another 300 students achieved cybersecurity industry certifications
- UCCS is expanding cybersecurity degrees – in Engineering, Business and Letters, Arts and Science
 - UCCS Cybersecurity faculty and students, in partnership with NCC and Space ISAC, significantly increased cybersecurity presentations, papers and seminars to 127
- UCCS cybersecurity faculty leveraged state funds to obtain over \$9M in additional cybersecurity funds in 2021
 - EAS obtained over \$2M in additional cybersecurity grants in 2021
 - UCCS received NSA funds for GenCyber intro and advanced teacher Summer Cybersecurity Camps
- UCCS leads the Mountain West Cybersecurity Consortium (MWCC), over 40 post-secondary institutions cybersecurity.
- UCCS is Implementing a long-term strategic Cybersecurity POWER Strategy to maintain and expand cybersecurity programs and to become self-sufficient, but for the next three years - the state's investment is critical along the path toward sustainability
 - Nine Faculty Seed grants awarded to faculty in Engineering, Business, Education, Letters Arts and Sciences and Public Affairs
 - Six undergraduate students were provided summer research working Cybersecurity research projects funding



Pikes Peak Community College

PPCC spent the full \$300,000 allocation. Spending (in major categories) is as follows:

- **Scholarships** – \$30,000 – Awarded 24 \$1,250.00 scholarships. The legislation required us to spend 10% of our total allocation on scholarships. Met our obligation.
- **Faculty Cost** – \$46,000 – April Frost, Cyber Instructor, was hired in January 2019. Expense represents 6 months (January through June).
- **Travel** – \$14,000 – Travel and training cost for cyber faculty and students in the cyber club.
- **Operating** – \$210,000 – Operating expenses for infrastructure investments to Room E204 at Rampart. Expenses include costs for audio visual equipment and networking nodes and related software. Also included a small amount for administrative cost in administering the funds.

Outcomes:

- 50% increase in students since SB 18-086 began.
- 468 students currently enrolled in the program.
- 59 students completed degrees in Cyber last year at PPCC.
- Funding from SB 18-086 has enabled PPCC to attract top faculty and build out first-rate training facilities.



Colorado Mesa University

- \$40000 spent on student scholarships
- \$25000 spent on additional student support in the form of work opportunities on campus
- Cybersecurity Center research has resulted in 4 peer-reviewed articles in the last year
- Graduates from our cybersecurity program employed at Los Alamos National lab, Lockheed Martin, Comcast, Deloitte, and Aspen Technology Groups
- Designated as a National Center of Academic Excellence in Cyber Defense (CAE-CD) by NSA and Homeland Security
- Hired an additional faculty member in cybersecurity
- Supported 13 internships



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- Fall 2021 marks the 4th year of the Bachelors of Science in Cybersecurity offering and the 3rd year of the Masters degree. These degree programs are interdisciplinary, integrating Computer Science, Computer Information Systems and Business Analytics, and Criminal Justice and Criminology.
- 273 students currently enrolled in the B.S. Cybersecurity major, one of the fastest growing majors since its inception in Fall 2018. 16 graduates in the 2020-21 year.
- 40 current Masters students, growing from 15 students at launch three years prior.
- Awarded \$45,750 in scholarships in the 2020-21 school year, supporting a total of 35 students enrolled in cybersecurity programs. \$25,000 in matching scholarship funds was also secured.
- The Cyber Range for hands-on learning was launched under the leadership of Director Richard MacNamee, funded through a combination of state funds, institutional investment and private matching dollars.
- Several employer partnerships have been forged, creating paid experiential learning internships for cybersecurity students, leading to opportunities for advanced skills certification training and full-time employment. One of these partners has hired 75% of interns placed with them to-date.



Western Colorado University

- Western is in the fourth year of offering a computer science major with an information security emphasis. This program is distinctive in Colorado as a technically focused cyber security bachelor's degree.
- Currently 33 students (15 freshman, 9 sophomores, 2 juniors and 7 seniors) in the program served by use of funds for 0.97 FTE faculty within CS program.
 - 4 graduates last year.
 - largest emphasis in Western's fastest growing major.
- Western faculty pursuing the National Security Agency (NSA) Center of Academic Excellence in Computer Defense (CAE-CDE) designation for Information Security
- Hosted an NSA funded GenCyber camp for 17 students, also engaging two of our cyber seniors as camp assistants.
- Hosted a computer camp for 11 Middle and High School Students with topics such as brute force password hacking, brute force password hacking Python implementation, designing a good password, and encryption and ciphers.
- 4 student scholarships totaling \$27,300.
- Western had 2 students funded as Teaching Assistants upper division cyber course.
- One of our students is being interviewed and polygraphed at NSA this week for a summer internship at the National Security Agency.
- Active participant in the Mountain West Cybersecurity Consortium (MWCC).



Colorado State University System



SB 18-086 Report, CSUS January 2022

	FY 19	FY 20	FY 21	FY22*
Total SB 18-086 Appropriation	\$1,200,000	\$1,200,000	\$729,412	\$1,200,000
Actual Amount Spent on Scholarships	\$122,435	\$306,050	\$286,005	\$518,267
Total Number of Scholarships Awarded	45	141	118	185
Required Allotted Amount Earmarked for Scholarships	\$180,000	\$180,000	\$108,000	\$180,000
At or above allotted amount of scholarship earmark	No	Yes	Yes	Yes
Number of faculty/adjuncts hired...				
	2	32	9	19
Number of student internships				
	71	129	118	164
Number of degrees/certificates/course completions				
	28	303	371	695
Number of presentations/seminars on cybersecurity				
	83	143	15	48
Amount of all other matching money raised				
	\$50,000	\$7,700,000	\$3,249,816	\$3,611,369

- More than one hundred and eighty (180) faculty/interns hired under the grant
- More than 500 student participants have graduated, virtually all have jobs in IT w/ IT Security prominent
- CSU central IT interns are scheduling a visit to CSU-Pueblo to assist with old Windows system upgrades

* Through December 2021



Thank you.
We are happy to answer any questions.

