Renaming of Computer Science Cybersecurity Concentration

RES 252615

AAC, BPC

RESOLVED: That the Academic Senate approves the proposed name change of the Computer Science Information Security Concentration to the Computer Science Cybersecurity Concentration.

RATIONALE: The adoption of the title Cybersecurity instead of Information Security for this concentration aligns with how the field is identified in both academia and the industry. Furthermore, this name change generates better name recognition for recruitment purposes and realigns the Computer Science program at CSU, Bakersfield with many of the others across the system. There are no curricular or resource implications for this name change.

Attachment: 2025-2026 07_Proposal to Rename the Computer Science Information Security Concentration

Distribution List:
President
Provost and VP for Academic Affairs
VP for Student Affairs and Strategic Enrollment Management
AVP for Faculty Affairs
AVP Academic Affairs and Dean of Academic Programs
College Deans
Associate Deans
Dean of Libraries
Dean of Antelope Valley
Dean of Extended Education and Global Outreach
Department Chairs
General Faculty

Approved by the Academic Senate:
Sent to the President:
President Approved:

2025-2026 REFERRAL #07
Proposal to Rename the Computer Science Information Security Concentration

Date: September 4, 2025

From: Melissa Danforth, Academic Senate Chair

To: Tiffany Tsantsoulas, Academic Affairs Committee (AAC) Chair
Amanda Grombly, Budget and Planning Committee (BPC) Chair

cc: Katherine Van Grinsven, Academic Senate Administrative Analyst

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At their meeting on August 26, 2025, the Academic Senate Executive Committee requested that the Academic Affairs Committee (AAC) and Budget and Planning Committee (BPC) review and address the Proposal to Rename the Computer Science Information Security Concentration to the Computer Science Cybersecurity Concentration.

During your discussion, please consider:
- rationale as presented in the attached proposal
- impact on any students in the program.

Please take up this matter with your committee and get back to me with your recommendation. If your recommendation requires Senate action, please prepare a resolution and the rationale for the resolution.

Thank you.

Attachments:
- cybersecurity-letter
- Memo-CyberSecurity-NameChange
- NSME CC APPROVED_Changes to Program_CEECS-Cybersecurity
- Proposal to Rename Information Security Concentration to Cybersecurity - Fall 2024 update

DR. MELISSA DANFORTH, CHAIR, ACADEMIC SENATE
California State University, Bakersfield
9001 Stockdale Hwy. • Mail Stop: 20 BDC • Bakersfield, CA 93311

academicsenatechair@csub.edu   csub.edu/senate   THE CALIFORNIA STATE UNIVERSITY

To whom it may concern:

The proposal to rename the Bachelor of Science in Computer Science concentration in Information Security to the concentration in Cybersecurity has my support.

The proposal was voted and approved during the department meeting on October 3, 2024.

Sincerely,

Saeed Jafarzadeh   10/21/24

Saeed Jafarzadeh, Ph.D.

Department Chair, CEE/CS

College of Natural Sciences, Mathematics and Engineering
California State University, Bakersfield
9001 Stockdale Hwy. • Bakersfield, CA 93311

661.654.3450   **csub.edu/nsme**   THE CALIFORNIA STATE UNIVERSITY

The NSME Curriculum Committee has reviewed and approved the proposal from the Department of Computer and Electrical Engineering and Computer Science to rename the Information Security degree to Cybersecurity. This proposal was discussed and approved at the NSME Curriculum Committee meeting on 10-25-2024.

Brian Ryals

Chair of NSME Curriculum Committee

College of Natural Sciences, Mathematics and Engineering
California State University, Bakersfield
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661.654.3450   csub.edu/nsme   THE CALIFORNIA STATE UNIVERSITY

California State University, Bakersfield
Academic Operations in Enrollment Systems
Mail Stop: EDUC 22, 9001 Stockdale Highway
Bakersfield, California 93311-1022
Email: curriculum@csub.edu
Tel. (661) 654-2285

CHANGES TO PROGRAM FORM

Form Number

Reset Form

PROPOSAL ACTION (Select One)

EFFECTIVE CATALOG YEAR: FALL 2025

- ● PROGRAM REVISION
- ○ PROGRAM CANCELLATION
- ○ PROGRAM PLACED IN MORATORIUM
- ○ ADD CONCENTRATION
- ○ ADD EMPHASIS
- ○ ADD OPTION
- ○ ADD MINOR

PROGRAM OR SCHOOL & DEPARTMENT *(Required)*

School/Program: College of Natural Sciences, Mathematics & Engineering

Department: Computer & Electrical Engineering & Computer Science

Proposed by: M. Danforth and A. Cruz

RATIONALE FOR DEGREE PROPOSAL *(Required)*:

Provide Rationale for Degree Proposal:

Title change from Information Security to Cybersecurity to be consistent with other CSUs, see attached proposal.

DEGREE INFORMATION (MAJOR, CONCENTRATION/EMPHASIS/OPTION/MINOR)

Degree Title:
BS Computer Science, concentration in Information Security

REVISIONS TO CURRENT DEGREE DESCRIPTION AND REQUIREMENTS

Degree Description *(Attach or copy catalog copy; Use Track Changes to Add/Revise Details):*

No curricular changes, only the title. See attached.

ADDING AN OPTION, CONCENTRATION OR SPECIAL EMPHASIS (ATTACH APPROPRIATE DOCUMENTS):

Per EO 1071, before any option, concentration, or special emphasis (or similar subprogram) approved under this delegation, can be implemented, the campus shall obtain a Chancellor's Office confirmation of compliance with CSU policy and applicable law. Campus notifications shall be submitted to the Department of Academic Programs and Faculty Development (degrees@calstate.edu). The following information must be submitted:

- The exact title of the new subprogram and the complete degree designation and title of the major degree program housing the new subprogram (e.g., Bachelor of Science in Biology with a Concentration in Biochemistry);

- A list of courses and required units constituting that new subprogram;

- Total units required to complete the entire degree, including the combination of subprogram and major program;

- The complete list of courses and required units constituting the major degree program as approved by the Chancellor's Office;

- A 4-year major-and-subprogram roadmap for freshmen and a 2-year major-and-subprogram roadmap for transfer students;

- The CSU degree program code (formerly called "HEGIS") that students use to apply to the major degree program;

- The campus-proposed CSU degree program code to be used to report enrollments in the concentration (may be the same as the degree code);

- A detailed cost-recovery budget for self-support subprograms to be offered within state-support major degree programs; and

- Documentation of all campus-required curricular approvals.

ADDING A MINOR

Provide the Program Description and Minor Requirements:

N/A

IMPACT OF DEGREE PROPOSAL ON OTHER PROGRAMS OR DEPARTMENTS

What Is the Impact of This Degree Proposal on Course Offerings from Other Department(S) Or Programs?

Please Include Supporting Emails with This Proposal:

N/A, no curricular changes.

IMPACT OF DEGREE PROPOSAL ON COURSE(S)

List All the New and Revised Courses Required for This Degree Proposal (If Applicable):

Attach/Submit All the Course Proposal Forms and Catalog Copy Together with This Form for Curricular Review and Approval

N/A

NEXT STEPS

- Attach Course Proposal Form(s) to This Proposal (If Applicable)

- Attach Catalog Copy w/ revisions (using track changes) to This Proposal

- Attach Appropriate Documents if Adding an Option, Concentration or Special Emphasis

- Attach Revised Academic Roadmap

- Submit to Department/Program Curriculum Committee for Review & Approval

- Department Submits to School/Program Curriculum Committee for Review & Approval

- School/Program Curriculum Committee Submits Related Forms to GECCo (If Applicable)

- Chancellor's Office (CO) Notification for Implementation of Option, Concentration or Special Emphasis

- If No Additional Approvals Are Required, School/Program Curriculum Committee Submits to Academic Operations After Final Approvals Have Been Recorded. *See Annual Catalog & Curriculum Deadlines Dates*

SCHOOL/PROGRAM COMMITTEE & OTHER APPROVALS:

Department Chair/Program Director: *Saeed Jafarzadeh*	Date: 10/14/2024
School/Program Curriculum Committee Chair:	Date: May 7, 2025
Dean of School: Karlo Lopez (May 7, 2025 08:27 PDT)	Date: May 7, 2025
Director of GE:	Date:
CO Notification for Implementation of Option, Concentration or Special Emphasis:	Date:
CO Confirmation of Compliance for Options, Concentration or Special Emphasis:	Date:
President's Approval for Minor:	Date:
WSCUC Approval:	Date:
Director of Academic Operations:	Date:

ACADEMIC OPERATIONS USE ONLY:

Effective Term:	Catalog Year:
CIP Code:	HEGIS Code:
Program Code:	Plan Code:
SubPlan Code:	

09.21.20

Request for Concentration Title Change and CIP Code Change for the Information Security Concentration in the Computer Science B.S. Program

Summary

The Computer and Electrical Engineering and Computer Science (CEE/CS) Department at CSU Bakersfield (CSUB) proposes to change the title of the "Information Security" concentration in the Computer Science B.S. degree program to the title of "Cybersecurity", beginning in Fall 2025. We also propose to change that concentration's paired CIP code to the Cybersecurity option in the CSU Program Code list[1]. **No curricular changes to the concentration are proposed.**

Program Information

CSU Campus: California State University, Bakersfield (CSUB)

Proposed implementation date: Fall 2025

Current concentration title: Computer Science, BS, Concentration in Information Security (CMPS plan, ISEC subplan)

Proposed concentration title: Computer Science, BS, Concentration in Cybersecurity

Proposed paired CIP code: 11.1003

CIP 11.1003 definition[2]:

A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

Rationale

Changes in Disciplinary Conventions

When the Information Security concentration was proposed, the discipline tended to use the titles of Information Assurance or Information Security for academic programs. The phrase "cybersecurity" was not in common usage among academia at that time and was still gaining traction within industry. There was not even a common agreement back then on if the phrase should be one word ("cybersecurity") or two words ("cyber security").

In the time since the concentration was approved, the phrase "cybersecurity" (one word) has become more common in industry and academia. It has also become more common in non-technical contexts, such as media usage, and is familiar to high school students and their parents. While some professional

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[1] https://www.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/CSU_Codes_to_CIP_2020.pdf
[2] https://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cipid=87263

societies still have "information security" or variations in their society names, such as the Information Systems Security Association (ISSA), "cybersecurity" is currently the more common term.

Recruitment Issues

Potential students are confused between the "Information Security" concentration and the "Information Systems" concentration in Computer Science, due to the similar nature of the concentration titles. Additionally, program advisors report that some students do not realize that the "Information Security" concentration focuses on cybersecurity. This has led to lower enrollments in the "Information Security" concentration, compared to the "Traditional" and "Information Systems" concentrations offered at CSUB in Computer Science.

Renaming the concentration to "Cybersecurity" will help with both the confusion between similarly named concentrations and with clearly identifying the intent of the concentration to potential students.

Titles Used at Other CSUs

As detailed in Appendix A, no other Computer Science degrees or departments in the CSU uses "Information Security" as a program title or option title. Most of the bachelor's and master's programs based in the Computer Science departments at other CSU campuses use "Cybersecurity" or "Cyber Security" as their titles, with a few using other variations on the word "security".

The only other programs in the CSU currently using the titles "Information Security" or "Information Systems Security" are business programs. Since this program is a computer science program, not a business program, renaming the concentration to "Cybersecurity" will realign the program to programs offered by other CSU Computer Science departments.

Additionally, there is now a "Cybersecurity" entry in the CSU Program Codes list and we are asking to change the paired CIP code to the CIP listed in the "Cybersecurity" entry, as that code most accurately aligns to the concentration.

Concentration Description and Requirements

There are no requested changes to the concentration curriculum. However, the Chancellor's Office guide for renaming concentrations says all proposals should include a program description and degree roadmap[3]. The following information is from the **Fall 2024 CSUB catalog**[4] and associated program mapper website[5] for the Computer Science – Information Security concentration.

The concentration description, as recorded in the CSUB catalog, is as follows: "This concentration is intended for students who wish to pursue a career in information assurance and cyber security, either with government agencies or with industry."

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[3] https://www.calstate.edu/csu-system/administration/academic-and-student-affairs/academic-programs-innovations-and-faculty-development/Documents/Changing-a-Degree-Title-or-Suggesting-a-New-Code.pdf
[4] https://catalog.csub.edu/academic-degrees-programs/undergraduate-majors/computer-science-bs-concentration-information-security/#programrequirementstext
[5] https://programmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/programs/46100888-2e62-f48b-c9b8-8ced7be1cd14

The concentration requires the following coursework (courses marked with * are required by the Computer Science – Traditional degree program and courses marked with a + are electives in the Computer Science – Traditional degree program):

- Lower-division CMPS core (16 units): CMPS 2010*, 2020*, 2120*, and 2240*
- Upper-division CMPS core (32 units): CMPS 3120*, 3140*, 3350*, 3420*, 3500*, 3600*, 3620*, 3640*, 4910*, and 4928*
- Elective CMPS courses (12 units): 12 units chosen from CMPS 2650, 3560*, 3650, 4450+, 4510+, and 4620+, and MATH/CMPS 4300+. At least one course must be at the 4000-level.
- General cognate courses (15 units): MATH 2310* or 2510*, 2320* or 2520*, 3200*, and PHIL 3318*
- Global Intelligence and National Security (GINS) cognate courses (11-12 units):
  - Analytical tool: Select one course (3-4 units) from CRJU 3500, ECON/MIS 3200, GEOL 4050 or 4150, MIS 4100, or SOC 4010
  - Focus area: Select at least eight units from CHIN 1000+1001, 1010+1011; CRJU 4340; HIST 3150, 3310, 3410, 3420, 3490, 4510; JPNS 1000+1001, 1010+1011; PLSI 3040, 3320, 3330, 3340, 3350, 3380, 3610, 3620, 3630; and SOC 4020
- General education and university requirements. The following are modifications and notes for program (32 units of GE and other university requirements after modifications):
  - Area B4 is met through MATH 2310 or 2510 with a grade of C- or better
  - GWAR is met through PHIL 3318 with a grade of C or better
  - Upper-division Area C is met through PHIL 3318
  - CSUB's Capstone requirement is met through CMPS 4928
  - Area B2/B3 is met through program curriculum
  - 3 units of lower-division Area D is met through program curriculum
  - Upper-division Area D is met through program curriculum
  - Area E (SELF) requirement is strongly advised to be met by selecting a required GE course with a SELF overlay. If a student opts to take a stand-alone course for SELF, that will add 3 units to that student's GE pathway. (note: Area E is not in CalGETC, but is still required by CSUB at the time of writing this proposal in February 2024)

Note on 2-Year Roadmap

No 2-year roadmap is provided because there is no ADT for the cybersecurity concentration within Computer Science. Students transferring to CSUB with the Computer Science ADT are expected to complete the Computer Science – Traditional concentration[6] at CSUB, rather than the cybersecurity concentration.

4-Year Roadmap

Cybersecurity concentration students entering CSUB as first-year students are expected to be calculus-ready in their first semester. The roadmap is as follows (note: GINS Focus Area 3 course is only required if student selects a 3-unit course for GINS Focus Area 1 or GINS Focus Area 2):

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[6] https://programmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/programs/6d1648e2-b3cc-7b03-d453-7d8a82abe8c1

Year 1	**Fall semester**		**Spring semester**	
	CMPS 2010	4	CMPS 2020	4
	MATH 2310 or 2510	4	MATH 2320 or 2520	4
	GE Area A1 (CalGETC 1c)	3	GE Area A3 (CalGETC 1b)	3
	GE Area A2 (CalGETC 1a)	3	GE Area C1 or C2 with SELF (CalGETC 3a or 3b)	3
	CSUB First-Year Seminar	2		
	Total units	16	Total units	14

Year 2	**Fall semester**		**Spring semester**	
	CMPS 2120	4	CMPS 2240	4
	MATH 3200	4	CMPS 3350	4
	GE Area C1 or C2 (CalGETC 3a or 3b)	3	GE Area B1 (CalGETC 5a with optional 5c lab course)	3
	AI US History	3	GE Area F (CalGETC 6)	3
			AI Government (CalGETC 4)	3
	Total units	14	Total units	17

Year 3	**Fall semester**		**Spring semester**	
	CMPS 3120	3	CMPS 3140	3
	CMPS 3420	4	CMPS 3620	4
	CMPS 3600	4	CMPS Elective 1	4
	GINS Focus Area 1	3-4	GE JYDR	3
	Total units	14-15	Total units	14

Year 4	**Fall semester**		**Spring semester**	
	CMPS 3640	3	CMPS 3500	3
	CMPS Elective 2	4	CMPS Elective 3	4
	CMPS 4910	2	CMPS 4928	2
	PHIL 3318 [GWAR/UDC] (CalGETC GWAR/UD 3)	3	GINS Analytical Tool	3
	GINS Focus Area 2	3-4	(if needed) GINS Focus Area 3	0-3
			(if needed) Any CSUB course to get to 120 units overall	0-3
	Total units	15-16	Total units	At least 16

Appendix A: Titles Used at Other CSUs

CSU bachelor's programs using Cybersecurity or variation:

- Fullerton: option in Computer Science named Cybersecurity [CS Department]
- Stanislaus: option in Computer Science named Cybersecurity [CS Department]
- San Bernardino: option in Information Systems and Technology named Cyber Security [Business college]
- San Bernardino: option in Intelligence and Crime Analysis named Cyber Security [Social Sciences college]
- San Marcos: BS in Cybersecurity [special self-support 2+2 program in Science & Technology area]

CSU bachelor's programs using Information Security or variation:

- Dominguez Hills: option in Business Administration named Information Systems Security [Business college]
- San Bernardino: option in Administration named Information Security [Business college]

CSU bachelor's programs using other names containing "security":

- Cal Poly SLO: option in Computer Science named Privacy and Security [CS Department]
- Monterey Bay: option in Computer Science named Network and Security [CS Department]
- Dominguez Hills: option in Computer Technology named Homeland Security [CS Department]
- San Bernardino: option in Information Systems and Technology named National Security [Business college]
- San Bernardino: option in Intelligence and Crime Analysis named Homeland Security [Social Sciences college]

CSU master's programs using Cybersecurity or variation:

- Dominguez Hills: MS in Cyber Security (self-support) [CS Department]
- San Marcos: MS in Cybersecurity (self-support) [CS/IS Department]
- San Bernardino: MS in Cybersecurity and Analytics (self-support) [Business college]
- San Bernardino: MS in Information Systems and Technology, option in Cyber Security (stateside) [Business college]
- San Bernardino: MS in National Cyber Security Studies (stateside) [Social Sciences college]
- San Diego: MS in Cybersecurity Management (stateside) [Business college]

CSU master's programs using Information Security:

- Cal Poly Pomona: MS in Information Security (stateside) [Business college]