CIS Advisory Board Meeting Agenda

Date: April 10 Time: 5:30 p.m.

Location: https://smccd.zoom.us/j/8193686149

Meeting ID: 819 368 6149

Please find the proposed agenda for our discussion below:

1. **Program Overview**
   o A brief overview of the programs we offer by Hellen
2. **Updates Since Last Meeting**
   o The Foundations of CS certificate by Kamran
   o Three new courses and a certificate in AI by Kamran
   o Degree in Data Science planning by Hellen
   o State of our certificate in Cybersecurity by Hellen
3. **Generative AI**
   o Open discussion with focus on:
     - What does generative AI mean for Computer Science education and job opportunities for our students
     - To what extent is generative AI being used in software development
     - What skills are expected from our graduates now

We eagerly anticipate your participation and valuable contributions to our meeting. Please use the provided Zoom link and meeting ID to join the meeting.

Warm regards,
Hellen Pacheco
Professor of Computer Science
pachecoh@smccd.edu

Last	First	Notes	Company	Title	Attended?	Email	Phone
Gamez	Francisco		_SMCCD	Dean Business & Technology Division CSM	No	gamezf@smccd.edu	
Chin	David	Organizer	_SMCCD	Instructional Aide at CSM	Yes	chind@smccd.edu	
Eftekhari	Kamran	Organizer/Prese	_SMCCD	Full-time Faculty at CSM	Yes	eftekharik@smccd.edu	
Pacheco	Hellen	Organizer/Prese	_SMCCD	Full-time Faculty at CSM	Yes	pachecoh@smccd.edu	
Martens	Bryce		_SMCCD	Adjunct Faculty at CSM	Yes	martens@smccd.edu	
Stan	Issacs		_SMCCD	Adjunct Faculty at CSM	Yes	stan@isaacs.com	
Maddux	Stormy		County of San Ma	Deputy Chief Information Security Officer at CSM	No	madduxsmith@gmail.com	
Roberts	Kimberly		Google, Inc.	Chief of Staff to VP for Education and Research Operati	No	kimberleyr@google.com	
Roldan	Myra		Amazon	Techinical Program manager with AWS	No	mirarol@amazon.com	
Seiden	Gregory		Oracle	(Former VP)	No	gregoryseiden@my.smccd.edu	
Pieraldi	Stephen		HP	Eng Fellow	Yes	stephen@pieraldi.com	650-871-8794
Tom	Ryan		Comcast		No	tompryan@comcast.net	
Troy	Brian		Qorvo, Inc.	Senior Product Engineer	No	Brian.Troy@qorvo.com	650-619-2056
Wang	Anthony				No	antony.dy.wang@gmail.com	
Elflving	Daniel				Yes	dannyelfving@gmail.com	
Jin	Ziqi Erica		Guidewire	Former CSM student, software engineer	Yes	erica.jzg@gmail.com	
Latt	Su		Guidewire	Former CSM student, software engineer	Yes	sulattphone@gmail.com	
Wang	Zhilij				No	zhilijwang@gmail.com	
Asemi	Hadi		Autodesk	Manager	No	hadiasemi20@gmail.com	
Rategh	Hamid		Samsung	Director	Yes	rategh@gmail.com	
Babak	Pezeshki		UC Irvine	Instructor	No	pezeshkib@uci.edu	
Magashazi	Joshua	NEW	Google, Inc.	Manager	Yes	Joshua.magashazi@gmail.com	
Moham	Akhoirshida	NEW	WVC	Instructor	Yes	mohammed.akhoirshida@wvm.edu	

Meeting Minutes

Date and Time: 4/10/2025, 5:30 pm – 7:00 pm

Location: https://smccd.zoom.us/j/8193686149

Agenda Item	Discussion Points
Program Overview	- A quick review of our programs was presented by Hellen

Updates Since Last Meeting	- Introduction to the two new certificates created by Kamran (Foundations of Computer Science and AI/ML) were presented by Hellen with Kamran input
	- New prospects regarding an ADT degree in Data Science that is on the works was presented by Hellen
	- State of our certificate in Cybersecurity was presented by Hellen
	    o We were able to offer the 3 main courses in the certificate in the past year for the first time: CIS 479, 482, 493
	    o We are unsure why enrollment is low given perceived high demand

Generative AI – Open Discussion with focus on:
 	
- What does Gen AI mean for CS Education and opportunities for our students
- To what extent is Gen AI being used in software development
- What skills are expected from our graduates now
	Open Discussion with lots of feedback from our advisory board members:
	- Daniel Elfving suggested adding crypto and blockchain to our program and shared this resources:
	
	    o https://cointelegraph.com/news/crypto-and-blockchain-education-becomes-priority-at-top-universities
	
	    o Former SEC Chairman teaches a course on blockchain technology from MIT which you can view for free here:
	
	    o https://ocw.mit.edu/courses/15-s12-blockchain-and-money-fall-2018/
	    o https://www.youtube.com/playlist?list=PLUI4u3cNGP63UUkfL0onkxF6MYgVa04Fn
	- **What skills companies are looking for in new applicants?**
	    o **Strong indicators:**
	        ▪ **Capstone projects** that solve real problems (e.g., chatbot, recommendation engine, resume analyzer)
	        ▪ GitHub repo with:
	        ▪ Clear documentation
	        ▪ README files explaining the project
	        ▪ Code that runs or is hosted (e.g., on Streamlit, Flask, Hugging Face Spaces)
	
	    o AI job functions are often cross-functional, so companies look for:
	        ▪ **Communication skills**: Can the student explain an AI concept to non-technical people?
	        ▪ **Teamwork**: Have they worked in group projects? Used tools like Trello or Slack?
	        ▪ **Problem-solving**: Shown ability to break down complex issues into solvable parts?
	    o Since they're early in their career, employers want to see:
	        ▪ Passion for AI (GitHub stars, tech blog, Kaggle involvement)
	        ▪ Clear intent to continue to a 4-year program or further certs
	        ▪ Eagerness to learn on the job, not just follow instructions
	- Here is what we ask for at HP AI/ML Assistant or Technician

- Junior Data Analyst
- AI Tool Integrator (e.g., for marketing or customer service automation)
- Prompt Engineer (for small businesses/startups)
- Technical Support with AI/Chatbot focus
- QA Tester with AI tool exposure

- Ideas for assignments to help students master what they need:
    - Step 1: Ask ChatGPT to explain linear regression using your own words
    - Step 2: Write your own version of the code and compare it
    - Step 3: Modify the AI's code to solve a different problem

    - **AI Debates**: One side is human, one is AI — students critique and analyze the AI's reasoning

    - **AI vs. Human Code Challenge**: Can students write better code than ChatGPT?

    - **"Fix the AI's Mistake" Labs**: Students find and explain flaws in AI-generated content

- **GenAI *can't* do well**:
    - Bias detection
    - Understanding context or nuance
    - Evaluating trustworthiness

Hellen Pacheco is inviting you to a scheduled Zoom meeting.
Join Zoom Meeting
https://smccd.zoom.us/j/8193686149?omn=89622842266

Meeting ID: 819 368 6149

Advisory Board Meeting

Spring 2025

Welcome to CSM - CIS

Agenda

- Introductions
- Quick overview of our offerings
- Updates since last meeting
- Open floor for discussion

Current CIS Programs

Associate in Science
(60 units)

- Computer and Information Science
- Computer Science Applications and Development
- Web and Mobile Applications

Certificate of Achievement
(16-35 units)

- Computer Science Applications and Development
- Web and Mobile Applications
- Foundations of Computer Science

Certificate of Specialization
(under 16 units)

- Database Programming
- Data Science and Big Data
- Web Programming
- Web and Mobile App Development
- C++ Programming
- Java Programming
- Applied Python Programing
- Enterprise Cybersecurity
- Internet of Things
- **Machine Learning and AI**

Foundations of Computer Science Certificate of Achievement

Courses	Units
CIS 254 Introduction to Object-Oriented Program Design	4
CIS 255 (CS1) Programming Methods: Java or CIS 278 (CS1) Programming Methods: C++	4
CIS 256 (CS2) Data Structures: Java or CIS 279 (CS2) Data Structures: C++	4
CIS 262 Discrete Mathematics for Computer Science	3
CIS 264 Computer Organization and Systems Programming	4
Total	**19**

Machine Learning and Artificial Intelligence Certificate of Specialization

Courses	Units
CIS 400 Probability for Computer Scientists	4
CIS 401 Introduction to Machine Learning	4
CIS 402 Introduction to Artificial Intelligence	4
Total	**12**

CIS 400 is being offered for the first time this semester, with 25 students enrolled.

Path to a ZTC Certificate of Specialization

Applied Python Programming	Units
CIS 117 Python Programming	4
CIS 124 Foundations of Data Science	4
CIS 502 Applied Python Programming	4
Total	**12**

Proposal for ADT in Data Science

The California Alliance for Data Science Education (CADSE) is working on a transfer model curriculum (TMC) for an Associate Degree for Transfer (ADT) in Data Science.

Proposed Required Courses	CSM Equivalent Courses	Units
Introduction to Statistics/Foundations of Data Science	CIS 124 Foundations of Data Science	4
Programming 1 (C-ID COMP 122)	CIS 255 or CIS 278	4
Calculus 1 (C-ID MATH 210)	MATH 251 Calculus with Analytic Geometry I	5
Calculus 2 (C-ID MATH 220)	MATH 252 Calculus with Analytic Geometry II	5
Linear Algebra (C-ID MATH 250)	MATH 270 Linear Algebra	3
Multivariate Calculus (C-ID MATH 230) **?**	MATH 252 Calculus with Analytic Geometry III	5
Total		**21-26**
At least one of:		
Programming 2 (C-ID COMP 132)	CIS 256 or CIS 279	4
Discrete Structures (C-ID COMP 152)	CIS 262 Discrete Math for Computer Science	3
Differential Equations (C-ID MATH 240)	MATH 275 Ordinary Differential Equations	3

Proposal for ADT in Data Science

Cal-GETC Standards

Subject Areas	Courses	Units
Area 1: English Communication	3 courses	9
Area 2: Mathematical Concepts and Quantitative Reasoning	1 course	3
Area 3: Arts and Humanities	2 course	6
Area 4: Social and Behavioral Sciences	2 courses	6
Area 5: Physical and Biological Sciences	2 courses	7
Area 6: Ethnic Studies	1 course	3
Total		**34**

Enterprise Cybersecurity Certificate of Specialization

Courses	Units
CIS 121 Unix/Linux	3
CIS 151 Computer Networking	3
CIS 479 Computer and Network Security	3
CIS 482 Ethical Hacking	3
CIS 493 Cloud Security Fundamentals	3
Total	**15**

THE **SECOND** SMCCCD INTERCOLLEGIATE

HACKATHON

SKYLINE + SAN MATEO + CAÑADA

APRIL 18–25, HYBRID EVENT

INVITE FRIENDS & CLASSMATES! ALL ARE WELCOME!
DON'T WORRY — NO EXPERIENCE IS REQUIRED!

LEARN TECHNOLOGIES
WORKSHOPS w/ JS, PYTHON, APIs, DATA, CLOUD

SOFTWARE PROJECTS
GAMES, SITES, APPS; HANDS-ON RÉSUMÉ EXPERIENCE

CONNECT & NETWORK
MEET NEW INDUSTRY FRIENDS ACROSS OUR CAMPUSES

p5*js   pygame   pandas   HTML5 CSS3 JS   + more

DETAILS + SIGN UP HERE

skycs.club/hackathon

Questions? Contact
hackathon@skycs.club

Skyline College   College of San Mateo   Cañada College

Generative AI

What does generative AI mean for Computer Science education and job opportunities for our students?

To what extent is generative AI being used in software development?

What skills are expected from our graduates now?

Thank you!

A big thank you to all of you for taking the time to help us guide our students towards a brighter future!

ADT in Computer Science

REQUIRED CORE - 33 units				
C-ID COURSE	CSM'S COURSE	UNITS	CAL-GETC UNITS	TOTAL UNITS
C-ID COMP 122	CIS 255 Or CIS 278 (CS1)	4	0	4
C-ID COMP 132	CIS 256 Or CIS 279 (CS2)	4	0	4
C-ID COMP 142	CIS 264	4	0	4
C-ID COMP 152	CIS 262	3	0	3
C-ID MATH 210	MATH 251	5	3 – Area 2	5
C-ID MATH 220	MATH 252	5	0	5
C-ID PHYS 205	PHYSICS 250	4	4 – Area 5A & 5B	4
C-ID PHYS 210	PHYSIC 260	4	0	4
			7	33