

City College of San Francisco

Computer Networking & InfoTech Employer Advisory Board

6/29/20, 3:00 pm – 5:00 pm, Virtual Zoom Video Conference

Meeting Agenda

- | | |
|-------------------|---|
| 3:00 pm – 3:15 pm | Welcome and Introductions (Steve Nelson) |
| 3:15 pm – 4:00 pm | Description of the CNIT Department's academic programs, highlights, initiatives and what is on the horizon. (Richard Taha, Claudia Da Silva, Tamika Jones, Steven Nelson). 5 minutes each. |
| 4:00 pm – 4:45 pm | Individual major/certificate program course content review and industry critique and suggestions. Diversity check-up: How are we doing and ideas for improvement? |
| 4:45 pm – 5:00 pm | Open forum for additional topics and discussion. |

Career Technical Education Advisory Committee Meetings

CTE Program: Computer Networking & Information Technology (CNIT)

Department Chair: Richard Taha

Name of person completing this form: Steven Nelson, Employment Specialist and Meeting Convener and Facilitator

Date completed: August 18, 2020

Section 1. Overview

All Career Technical Education (CTE) programs are required to:

1. Ensure the CTE Advisory Committee is comprised of a diverse group of individuals:
 - a. representatives from within the program (faculty, classified, students); and
 - b. individuals external to the college who are actively involved in a variety of segments related to the workforce industry (e.g. local business leaders, compliance and licensing, industry employment agencies and associations).
2. **Meet with the CTE Advisory Committee** at least once per year;
3. **Document the meeting** by following sections 2 and 3 included in this template; and
4. **Submit the signed documentation** to Academic Affairs through the CCSF Office of Workforce and Economic Development (Cloud Hall 308) within 30 days of the meeting.

All CTE programs are encouraged to use a variety of approaches to engage with industry partners, as regularly as possible, to engage in robust and on-going conversations for continuous program improvement. Failure to meet these requirements may impact a program's ability to qualify for college funding (for example, Strong Workforce Program and Perkins funds).

How to meet the requirement:

1. Confirm Members and Membership on the Advisory Committee
 - a. if updates are needed on the webpage, send details to Joy Lamboy jlamboy@ccsf.edu
2. Communicate, confirm, and record below your meeting date, time, and location:
Date: 6/29/20 Time: 3 pm – 5 pm Location: CCSF Zoom Video Conference
3. Create your meeting agenda to address the required areas in Section 3;
4. Disseminate meeting materials (for example: Agenda, Program Review, SLO assessment data, Perkins Core Indicators, Labor Market Information, Certification Passage Rates);

5. Conduct the meeting, keeping minutes/notes of the discussion, using Section 2 to account for meeting participation by both internal and external attendees;
6. Document your meeting in the following way:
 - a. Record attendance and contact information using Section 2 form, feel free to use more than one page;
 - b. Synthesize the outcomes of the meeting discussion, completely filling out Section 3 of this template (CTE Advisory Committee Meeting Minutes);
 - c. Submit this completed form, sections 1, 2, and 3 with a Department Chair signature, along with a copy of the meeting agenda, within 30 days to your Dean.
 - d. Deans need to sign and then forward to the Office of Workforce and Economic Development to the attention of John Halpin, jhalpin@ccsf.edu.

Faculty resources, including templates and suggested best practices, are available at the [Resources for CTE Advisory Meeting of CCSF](#)

Section 2. Advisory Committee Members in Attendance

Meeting Date: June 29, 2019 CTE Program: CNIT

(External Members) Employers, Industry Associations, Professionals employed in the field

Name	Position	Business Name Address	Phone	Email	Signature
Jacqueline Scoggins	Systems Engineer	Lawrence Berkeley Labs 1 Cyclotron Road MS 59-4010A Berkeley, CA 94720	510 486 4000	jscoggins@lbl.gov	Virtual Attendee
Olivia Herriford	Regional Director/ Employer Engagement	ICT Digital Media Sector/ Hosted at Diablo Valley College	925.899.3836	olivia@bcc.net	Virtual Attendee
Ramsey Williams	Chief Info Security Officer	San Francisco Public Utilities Commission	415 695 7310	RBWilliams@sfwater.org	Responded to CNIT Industry Advisory

					Committee email survey
Casey Robertson-Howe	Pathfinder Prog. Coordinator	Salesforce	317 373 6198	crobertsonhowe@salesforce.com	Responded to CNIT Industry Advisory Committee email survey
Melvin Gibson	Computer Operations Supervisor	Alameda County IT Department	510 481 3700	Melvin.Gibson@acgov.org	Responded to CNIT Industry Advisory Committee email survey
Michael Rock	Web Dev Director	Alameda County	510 481 3700	Michael.Rock@acgov.org	Responded to CNIT Industry Advisory Committee email survey
Lena Zeng	CNIT alumni and Full Stack Developer	Sharesposts	N/A	lzhengem@gmail.com	Responded to CNIT Industry Advisory Committee email survey
Harold Mann	CoFounder	Mann Consulting	415 546 6266	hmann@mann.com	
Cameron Williams	VP/CIO	Professional Computer Support	415 252 5575	cameron@pcs-sf.com	Responded to CNIT Industry Advisory Committee email survey.

(Internal Members) Faculty, Administrators, Classified Staff, Students

Name	Position	Faculty/Administrators/Classified/Student	Email	Signature
Richard Taha	CNIT Dept. Chair	Faculty	rtaha@ccsf.edu	Virtual Attendee
Claudia Da Silva	Faculty	Faculty	claudia.dasilva@mail.ccsf.edu	Virtual Attendee
Sandy Jones	Faculty	Faculty	sjones@ccsf.edu	Virtual Attendee
Abigail Bornstein	Faculty	Faculty	abigail.bornstein@mail.ccsf.edu	Virtual Attendee
Sam Bowne	Faculty	Faculty	sam.bowne@gmail.com	Virtual Attendee
Elizabeth Biddlecome	Faculty	Faculty	ebiddlecome@ccsf.edu	Virtual Attendee
Tamika Jones	Faculty	Faculty	tjones@ccsf.edu	Virtual Attendee
Mercy Ho	Faculty	Faculty	mmercyho@gmail.com	Virtual Attendee
Kerrie Lu Faith	Former Student/Industry	Former Student/Industry	LuKerriey2k@gmail.com	Virtual Attendee
Edison Lam	Student/Industry	Student/Industry	elam3@mail.ccsf.edu	Virtual Attendee
Steven Nelson	Employment Specialist	Classified	snelson@ccsf.edu	Virtual Attendee

Section 3. CTE Advisory Committee Meeting Minutes

CTE Program: CNIT Meeting Date: June 29, 2020

1. Program Review and Feedback

All 16 of the CNIT award certificates and the CNIT A.S. Degrees, including the new AS with a concentration in Cybersecurity, were presented and feedback was solicited. The primary feedback was that students could benefit from more hands-on opportunities for students to learn, including internships and apprenticeships. It was also mentioned that we should enhance our offering in Cloud and virtualization, advanced web development, including content management systems, accessibility and secure inexpensive virtual environments in which students can practice web application development. In the area of Cybersecurity, it was mentioned that it helps for students to have some experience in IT as a developer, in Networking, or Systems/Database Administration.

2. Student Learning Outcomes addressing Program Requirements and Course Content Review and Feedback

SLOs were discussed for each of the 16 awards. The new classes that were added in the last year (CNIT 420-Microsoft Azure Administration, CNIT 160 Cybersecurity Responsibilities, CNIT 131H-Intro to HTML and CSS) were added to directly address needs expressed by employers and by instructors who are also in industry. A common thread expressed by employers was for students to be trained in Helpdesk and it was also expressed by an industry representative that the CNIT access –Web 2.0 Internet Technologies, which covers cloud-based applications such as Microsoft Office 365 and Wordpress, together with CNIT 134 that covers .NET for business applications, were very welcome additions. Also, for serverless environments, add AzureAD, InTune, SharePoint, as well as third party applications like Okta for SSO. (Not necessarily for training students on how to use/manage those specific systems, but more teaching the theory of how they work and why they are designed the way they are.) In the discussion of the Information Security Analyst Apprenticeship program, it was mentioned that the program was having a challenge recruiting employers to host apprentices, and that a possible solution may be to align and cooperate with other programs and employer associations (via partnering Deputy Sector Navigators). It was also noted that there should more training in cybersecurity technical writing, policy, standards, procedures, and how to develop and implement security awareness training programs and intelligence programs. It was also mentioned that learning the basics of cybersecurity tools such as firewalls administration, vulnerability management, and security incident/event management is becoming more and more important for entry-level positions.

3. Perkins Core Indicators for CCSF including Class Pass Rates, Persistence, Completion and Employment Outcomes; and where applicable, Licensure and State Certification Pass Rates Review and Feedback

	Skills Attainment	Completion	Persistence	Employment	NT Participation	NT Completion			
INFORMATION TECHNOLOGY	91.37	92.10	82.01	70.09	18.18	20.00			
				Skills Attainment	Completion	Persistence	Employment	NT Part	NT Completion
	070100	INFORMATION TECHNOLOGY, GENERAL		75.00	100.00	100.00	0.00	0.00	0.00
	070730	COMPUTER SYSTEMS ANALYSIS		81.25	83.33	87.50	100.00	25.00	16.67
<input type="checkbox"/>	0708	COMPUTER INFRASTRUCTURE AND SUPPORT		89.57	86.55	78.39	82.52	14.39	17.36
	070800	COMPUTER INFRASTRUCTURE AND SUPPORT		84.85	96.30	61.29	72.00	12.12	14.81
	070810	COMPUTER NETWORKING		92.54	81.01	80.18	83.08	15.35	19.75
	070820	COMPUTER SUPPORT		58.82	100.00	86.67	100.00	5.88	7.69
<input type="checkbox"/>	0709	WORLD WIDE WEB ADMINISTRATION		94.74	100.00	89.47	70.00		
<input type="checkbox"/>	0799	OTHER INFORMATION TECHNOLOGY		95.00	90.00	75.00	57.14	15.00	16.67
	079900	OTHER INFORMATION TECHNOLOGY		95.00	90.00	75.00	57.14	15.00	16.67

4. Labor Market Information demonstrating program continues to meet Labor Market Demand and doesn't represent unnecessary duplication with other programs in the region, review and feedback

<p><u>Projected Occupational Growth Rates in CA 2014-2024 (CA EDD)</u></p> <p>Technical Support 24.6%</p> <p>Web Development 48.3%</p> <p>Networking 19.8%</p> <p>Cloud 20% annualized (Gartner – approximate based on estimates from multiple sources)</p> <p>Cybersecurity 28% growth rate from 2016-2026 (US BLS)</p>
--

5. Overall Recommendations for the program

- Increase Cloud and serverless offerings, including AzureAD, InTune, SharePoint, as well as third party applications like Okta for Single Sign On
- Increase exposure to Cloud apps such as Office365 and business apps such as ServiceNow and applications that use the .Net framework
- Increase hands on experiential opportunities for students (internships/apprenticeships).
- Increase Web 2.0 technologies
- Increase offerings for advanced Javascript libraries and frameworks, and accessibility
- Find inexpensive virtual environments for practicing Web 2.0 and web app development
- Consider adding chatbot technologies to web development (AI + machine learning)
- Add Help/Service Desk training
- Train cybersecurity students to run security awareness programs, intelligence operations, firewall admin, (Cisco Firepower, Palo Alto, and Checkpoint), vulnerability management, and security monitoring (via Security Incident and Event Management tools and practices [SIEM]).
- Increase opportunities for students to learn soft skills (communication skills)

6. Planned Action Steps based on feedback

The CNIT program will continue to evaluate its courses, degrees, and certificate offerings and add retire and add new courses as appropriate to industry demand for those skills. At this time, areas that seem to be in high demand are Cloud technologies, Security, Web 2.0 and web app skills, Information Security, IT project management, and soft skills, (communication and presentation skills) needed in today's IT field. Additional class projects that teach project management communication and presentation skills will be added to the curriculum in addition to the most in-demand technical content.

Next Meeting Date: May 6, 2021 **Time:** 3:00 pm-5:00 pm **Location:** Virtual Conference

Signatures: Department Chair: _____

School Dean: _____

Associate Vice Chancellor: _____

APPENDIX

CNIT Employer Advisory Board Meeting Rough Notes for 6-29-20 (Virtual Zoom Meeting)

Present (virtually):

- Richard Taha, CNIT Department Chair and Faculty
- Olivia Herriford, Bay Area California Community College Deputy Sector Navigator for ICT
- Claudia da Silva, CNIT Faculty and Student Advisor
- Sandy Jones, CNIT Faculty
- Abigail Bornstein, CNIT Faculty
- Sam Bowne, CNIT Faculty
- Elizabeth Biddlecome, CNIT Faculty
- Steven Nelson, CCSF Employment Specialist (meeting convener and facilitator)
- Jaqueline Scoggins, Lawrence Berkeley Labs, Sys. Engineer, High Performance Computing
- Kerrie Lu Faith, former student and now employer, CyberSecurity Analyst, Circle CI
- Edison Lam, student, and intern at Lawrence Berkeley Labs, Site Rel. Eng. (HPC)
- Tamika Jones, CNIT Faculty

Employers who gave input via email:

After the meeting (after they read instructor's program descriptions and then answered three questions). Due to scheduling issues, these employers were not present at the virtual meeting, but provided input after the meeting.

- Casey Robertson-Howe, Salesforce Pathfinder Coordinator, Salesforce
- Melvin Gibson, Webmaster, Alameda County
- Michael Rock, Web Dev Director, Alameda County
- Lena Zeng, CNIT Alumni and Full Stack Developer, Sharesposts
- Cameron Williams, VP/CIO, Professional Computer Support
- Ramsey Williams, CISO, San Francisco Public Utilities Commission

The three questions are:

1. What type of entry-level positions do you have in IT?
2. What are the technical requirements for entry-level jobs?
3. What new IT technologies do you foresee becoming important in the near future, and that we should start teaching to our students?

Casey Robertson-Howe: Pathfinder Program Coordinator, Salesforce:

1. When considering Salesforce or its ecosystem, one of the most in-demand roles is Salesforce Developer; someone who can build, design and test custom code on the Salesforce platform.
2. The technical requirements for Salesforce developers are in software development – experience with Java is helpful in particular, as our proprietary language at Salesforce (Apex) is based on Java. It is also helpful to have experience with front end coding languages, like JavaScript and HTML. We actually just released a new JavaScript Developer certification! I also think it is important for entry-level developers to be able to speak to developer operations; best practices for deploying code, working on a scrum team, and agile methodologies.
3. I would love to circle back on you about this after we wrap up these first few Pathfinder cohorts and see how the students do!

Melvin Gibson, Computer Operations Supervisor, Alameda County IT Department

1. Service Desk, Client Services, Desktop support, Information Technology Specialist, Technical Support Specialist, Web Developer, Server Engineer, Network Engineer, Application Programmer, System Programmer, Admin Support.
2. Basic computer training and knowledge, understanding how computers work. AA or BS in Computer Science.
3. Web Development, Networking and Server Support, Team Collaboration, Cloud Computing, Client Services, Service Desk

Lena Zeng, CNIT Alumni & Full Stack Developer, SharesPosts

1. We have software engineer roles, help desk support, and dev ops
2. In general, we do not have entry level jobs, but mostly it has been hiring based on skill and code understanding – JavaScript (libraries/frameworks), Ruby, deploying apps to the cloud, etc.
3. I would say encourage more internships because that is where they would get experience and learn a lot, have them make connections.

Michael Rock (Webmaster) & Michael Dobbins (Web Dev Director), Alameda County

1. Regarding Web Designers, we have an entry level position that is part of a web designer track. We also have higher level positions for people with more experience.
2. Technical requirements for entry level people are: HTML5, CSS, some JavaScript, Photoshop, Illustrator. Some experience maintaining websites.
3. The most glaring thing I see missing in web designers is a knowledge of accessibility compliance. Although currently only required for government websites, the prevailing thought is that requirements will eventually be extended to all websites including company ones. And beyond the legal requirements, it is also a moral business issue. It is estimated that upwards of 20% of people visiting websites have some sort of physical impairment. The right thing to do and the profitable thing to do is make your website accessible to them.

Accessibility is new and knowledge in it would be a deciding factor for us when choosing a new candidate out of a pool of qualified candidates. In an entry level job, there should be some familiarity with CMS (Content Management System) at least conceptually if nothing else.

Cameron Williams, VP/CIO, Professional Computer Support

On the subject of cloud technologies, I'd recommend adding a information section on serverless environments and management using AzureAD, InTune, SharePoint, as well as third party applications like Okta for SSO. Not necessarily training them on how to use/manage those systems, more just on the theory of how they work and why they're designed the way they are.

Harold Mann, Co-Founder Mann Consulting

Skills/competencies are probably not as critical for our entry level positions as attention to detail, tenacity and follow through. I know those sound 'easy' but I'm continually shocked by how little people pay attention to the small but important items.

Ramsey Williams, Chief Information Security Officer, San Francisco Public Utilities Commission

1. None, ATM. City is over pent (\$2M+) on the pandemic.
2. 3 months experience (intern), apprentice program, at home tinkering with tech; CISSP; Preferably, previous experience in some other technology field (Developer, Networking, System Administration, DBA)
3. Technical Writing - CyberSecurity Policy, Standards, Procedures (folks get into cybersecurity for the tech, policy development is a gap); Running Security Awareness and Training Program; Intelligence – implementing an intelligence program; Tool Program/Administration (Entry Level); FW Administration – Palo Alto Network, CISCO Firepower, Checkpoint; VulnMgt – Implementing a Vulnerability Management Program; CyberSecurity Monitoring – What to look for in security consoles or a SIEM